INSTRUCTIONS

FOR

SECTIONALIZING PLANS

FOR

PRECISION-BUILT CONSTRUCTION

HOMASOTE COMPANY TRENTON, NEW JERSEY

INSTRUCTIONS FOR SECTIONALIZING PLANS FOR PRECISION-BUILT CONSTRUCTION

The Precision-Built Method of Construction is similar to conventional platform construction in all its major features with the exception of one -- METHOD. The method herein described makes it possible to build a frame structure in much less time than by the usual procedure and hence insures more economical and accurate construction. Big sheets of HOMASOTE (up to 8' x 14') make it possible to build large sections of walls and partitions in the franchised dealer's mill where power saws and the jig table make for speed and accuracy. All framing lumber, including rafters with difficult cuts, is pre-cut in the mill. Erection of the structure then becomes a simple matter and the average home is under roof generally the second day. Dry wall construction being a fundamental of this method, there is no delay whatsoever and all exterior and interior finish as well as plumbing, heating and electrical work proceeds immediately.

The designer should first familiarize himself with HOMASOTE, its application and uses as described in the "Descriptive Price List" issued by the HOMASOTE COMPANY. Then by studying Sheets A, B and C included in this method, he will learn the construction and use of the jig table and how wall sections are built at the franchised dealer's mill. Sheet No. 1 shows typical sections through Precision-Built walls and the designer should be thoroughly familiar with these before beginning to sectionalize a plan.

The floor plan is the first step. This is laid out in the usual manner, but the thickness of all walls should be 4 5/8" and all other dimensions figured accordingly. Exterior surfacing such as siding, shingles, brick veneer, etc., is applied after erection of wall sections and do not affect the wall section sizes. Show clearly all joints where sections meet during erection. For economy, no wall section should be higher than 8'-0" or longer than 14'-0"; these are the dimensions of the largest big sheet of HOMASOTE. For special conditions these dimensions of the section may be exceeded as it will be noted that the jig table is designed to take sections up to 9'-6" high and 18'-0" long. It is advisable to design so that a wall of a room may be covered by a single sheet of HOMASOTE. If a wall is longer than 14'-0", as in the case of a large room such as a living room, it will require more than one sheet to cover the surface and the joints of these sheets should be placed so that they may be concealed by "plaques" (see Sheet No. 4) at doors or windows. If no door or window occurs in a section longer than 14'-0" it is advisable to locate the joint or joints so that a pilaster, corner cupboard, bookcase or some feature in the design of the room will conceal them. If sand finish is used on the exterior of the building, joints should be located at doors or windows so that they may be concealed by plaques on the exterior as well as on the interior. If a door or window occurs at the end of a section, the jamb stud acts as the end of the section and the end stud of the adjoining section serves as the double stud for the opening at this point.

All wall sections should be numbered on the plan. It will be noticed on Sheet No. 165-4 that certain wall section numbers have adjoining letters and these letters have the following meanings:

E - an extra 4 1/8" length of HOMASOTE providing surface to cover the end of an adjoining corner wall section.

C - double studs at one end of wall section for corner. (When determining overall length of "C" sections, be sure to allow 1/2" for extra 4 1/8" length of HOMASOTE on adjoining "E" section.)

R - right hand end of section.

L - left hand end of section.

(Right and left ends are determined by reading from numbered side of section.)

2 - condition occurs on both ends of wall section.

Examples:
Section marked "EL 4" means that section #4 has an extra 4 1/8" length of HOMASOTE at left end.
Section marked "2 2C" means that section #2 has double studs at both ends.
See Sheet No. 3 for details of corner conditions which will further explain these instructions.

Now list all sections as shown in "Table of Sections" on Sheet No. 165-4. Show a schedule of doors similar to the one on this sheet.

After the sill detail has been determined, lay out the basement plan in the usual manner.

Elevations of the building are similar to the usual drawings with the exception that wall section heights are generally shown instead of ceiling heights (see Sheets Nos. 165-1 and 165-2). Be sure to indicate sill heights and glass sizes of windows; indicate pitch of roof.

Now lay out the first floor framing plan and list all members as shown on Sheet No. 165-3. Important members such as girders and double joists should be located by dimensions on this plan. Long girder members and headers are listed as single lengths, but these actually consist of convenient lengths chosen by the mill. Details of special cuts at the ends of members should be shown.

If the building is two storys, sectionalize the second floor plan in the same manner as the first floor plan and follow this with the second floor framing plan.

The roof framing plan should be drawn similar to that shown on Sheet No. 165-6 accompanied by the list of members. Fig. 1 on Sheet No. 5 will be an aid in roof planning. The lengths and cuts of rafters are fully explained on Sheets Nos. 6 and 7. Gambrel rafters are shown complete on Sheet No. 16.

Special wall sections are considered as those which are not rectangular in shape. Such sections as these occur frequently in houses having pitched roofs and must be detailed in outline. Sheet No. 17 covers these special sections in detail and Fig. 9 shows a typical section through the half-story portion of a one and one-half story house. Rafter No. 1 rests on the continuous plate over the first story wall sections and the joist acts as a collar beam. Rafter No. 2 has a different pitch than Rafter No. 1 and rests on the continuous plate over the half-story wall section "W" as in the case of a shed dormer. Dimensions A, H and J are determined from the plan. The total rise of Rafter No. 1 is found from the Roof Table of its selected rise using dimension A as the run. Then the dimension ED of Rafter No. 1 plus the total rise of Rafter No. 1 establishes the top of the ridge. The total rise of Rafter No. 2 is found from the Roof Table of its selected rise using dimension A as the run.

Wall Section W

To find the height of wall section W, add the total rise of Rafter No. 1 to ED of Rafter No. 1 and subtract from this sum the total rise of Rafter No. 2 plus ED of Rafter No. 2 plus 1 5/8" (continuous plate over section W) plus the floor construction.

Wall Section X

The ceiling height is always measured from the top of the single flooring to the underside of the ceiling HOMASOTE, hence the overall height of wall section X equals the ceiling height minus 1 1/8" (allowance for continuous plate minus ceiling HOMASOTE).

Dimension F1 is found from the table of Common and Jack Rafters (for the selected rise of Rafter No. 1) if the depth of the rafter is used as the run; for instance, if the rafter is 2" x 6" the depth is 5 5/8" (actual size of a 6" member).

Dimension B equals the floor construction minus ED of Rafter No. 1.

Then dimension C1 equals the total rise of Rafter No. 1 minus the sum of F1 plus B plus the overall height of section X. Dimension G is therefore the run if C1 is used as the total rise and is found in the Roof Table of the selected rise for Rafter No. 1. Thus K equals H minus G; L is the total rise if K is the run; and M equals the overall height of wall section X minus L.

It is now obvious that similar dimensions to C1, G, K, L and M on the other end of wall section X may be found by the same procedure, but notice carefully that F2 depends upon the pitch of Rafter No. 2 and hence the basic dimension C2 on this side of the ridge is longer than C1.

The detail of wall section X as part of a complete set of drawings should be shown only in outline as in Fig. 10 at the scale of 1/4" equals 1'-0".

Wall Section Y

This wall section runs parallel to the ridge. A dimension such as N which bears a definite relation to points and dimensions already known, can usually be determined. Hence P is the total rise (using selected rise of Rafter No. 1) if N is the run. Therefore the height of wall section Y equals M minus P. The bevelled plate on top of wall section Y is cut to fit the slope of the rafter to insure good nailing and a snug fit as well as to receive the upper edge of HOMASOTE on the section. No HOMASOTE is required on the outside of this section.

It is now evident that with experience the designer will be able to calculate quickly the necessary dimensions for special wall sections and that the use of the Roof Tables will enable him to find dimensions for these sections by other means than those described here.

Gable end sections are also considered special and should be detailed in outline as shown on Fig. 12. The dimensions for gable end sections are figured similarly to those of half-story sections. Fig. 11 shows the two conditions which occur because of joist direction. From experience these have been found to be the simplest methods of handling and those giving the best results. Interior HOMASOTE on gable end sections, if required for finished rooms, is applied after erection of sections so that only those parts of the sections within the room may have a finished wall surface. Some blocking is necessary for this application as all edges of HOMASOTE must be nailed. As is noted on Fig. 11, the ridge passes through the framing to the back of the exterior HOMASOTE. This permits the end of the ridge to be nailed to the top members of the gable end section. Obviously from Fig. 11, it will be seen that the top of the gable end sections is coincident with the top of the rafters.

The Precision-Built system of construction can be adapted to meet varying building codes in different sections of the country. While we recommend platform construction as best for speed and economy, it is perfectly possible to design so that studs may run down to the sill, so that corner posts and even girts may be used. If balloon construction is required the free guide on the jig table may be removed and two new short guides may be made and placed in position at the ends of the table. Then, the wall sections would be made 8'-0" wide maximum and up to whatever height required not exceeding 17'-0" maximum. Ribbons would then be set into the studs to take the exterior HOMASOTE and the second floor joists on the interior. The HOMASOTE would then be applied on the exterior only

and the interior HOMASOTE would then be applied after the sections are in place.

Although we show the wall sections bolted down to the foundation, this is done particularly to take care of hurricane conditions. We consider it good practice to toe-nail the wall sections through the sub-flooring into the joists. In cases where it is necessary to firestop or provide rodent protection the best practice is to cut the exterior HOMASOTE to a line representing the top point of the firestop or rodent protection and then either concrete or brick in from the exterior according to the requirements of the local building code. Then apply the remaining piece of HOMASOTE to the studs. No catting or blocking is required at this point unless sand finish treatment is going to be used.

At exterior corners, and where partition walls abut exterior walls, sections should either be spiked or lagscrewed together. After wall sections are erected the continuous plate should be run over the top of all sections as shown in the details. At this point the Big Sheets of HOMASOTE for the ceilings should be put in the building. Ceiling HOMASOTE for the second floor should be put into the building before the second floor is entirely closed in. Then the second floor joists are laid and either the sub-flooring or the finished flooring is applied. If a single floor is to be used be sure to cover immediately with waterproof building paper before erecting second floor sections or gable ends.

Window and Door Frames: If desired, window and door frames may be incorporated in the section at time of construction on jig table and this is absolutely necessary in cases where no interior or exterior casings or trim are to be used. However, we prefer that window and door frames be put in on the job because, if the floor should not be entirely level, they may be out of true if put in on the jig table.

The purpose of the 1" cement grout under the sill on the top of the foundation is primarily for purposes of leveling the first floor platform.

Plumbing: Plumbing in Precision-Built construction is handled exactly the same as in conventional construction with the exception that the HOMASOTE on the interior of bathroom and kitchen walls should be applied after the rough plumbing has been installed. Owing to the speed of construction the plumber should be notified immediately the contract is signed just when he is to be on the job. This will avoid serious delays.

Heating: Warm Air: Warm air heating ducts for one story construction may be installed in the same manner as for conventional work. For two story construction the heating ducts should be installed on the jig table at the time the section is constructed or it will be necessary for the heating man to be on the job and make the installation from above before the roof rafters are placed. Ducts running to second story should be put in interior wall sections. In designing wall sections and laying out first and second floor joists care must be exercised that the studs in

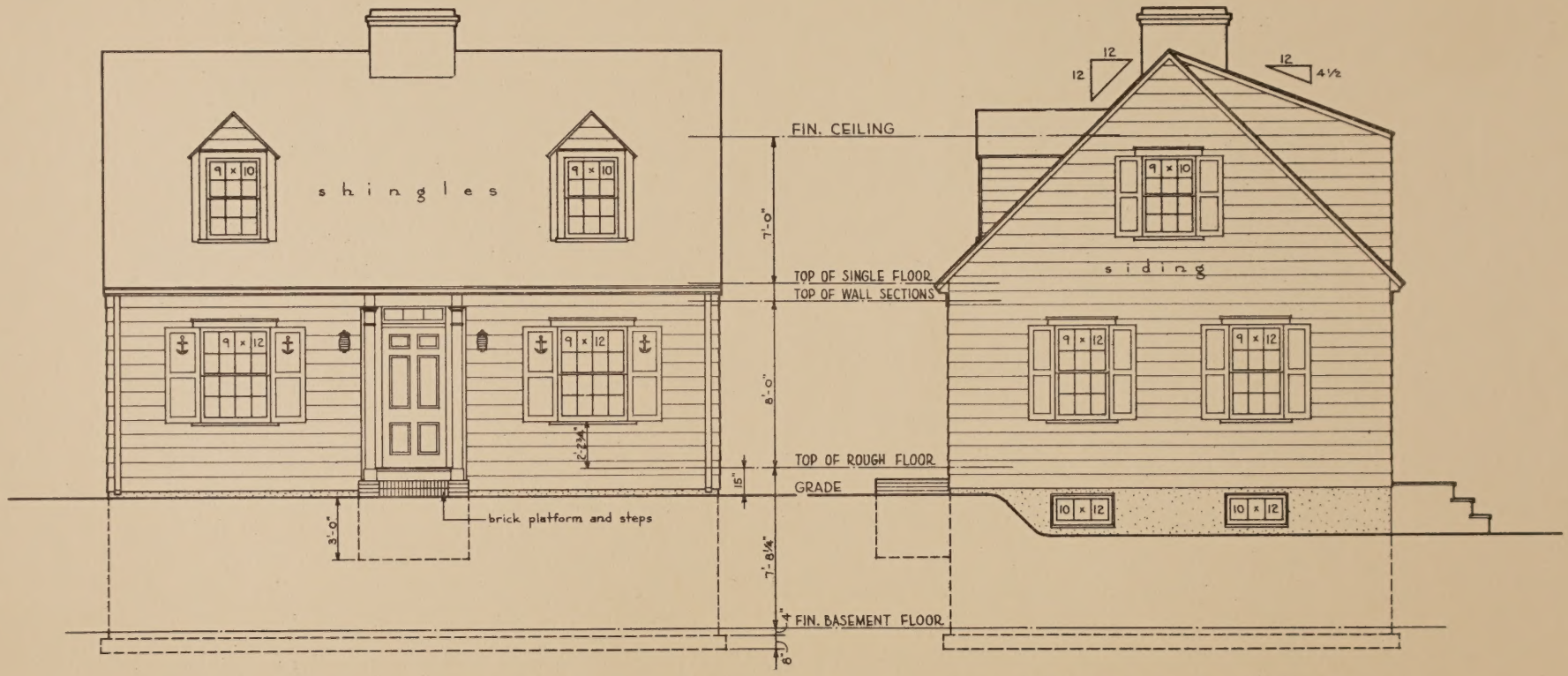
second floor sections correspond to the studs in first floor sections and joists be placed so as to allow free passage of the ducts.

Steam, Hot Water, or Vapor Vacuum Heat: For these types of heating the work proceeds as in the case of conventional construction with the exception that risers to the second floor are put in the exterior walls from the outside of the structure. This is accomplished by cutting a chase in the HOMASOTE on the exterior. When cutting this HOMASOTE out be sure to cut at an angle on each side of the cut so that the angles converge toward each other from the exterior to the interior. In this way the piece may then be glued back into place with Sote Glue. Care must be exercised to see that risers are properly covered.

Electrical Work: All electric wiring is fished as in the case of remodeling work except in the case where conduits are used. In this instance the conduits are installed at the time of construction of the section on the jig table and nipples are attached to the ends of the conduits to protect the threads in transportation and erection. Where the cable is fished care should be exercised, if building codes require lateral blocking in the section, to see that such blocking be placed at a position above the switch boxes.

Electrical outlet boxes may be attached directly to the HOMASOTE by the use of metal wallboard clips. The electrician should be called on the job at the earliest possible moment so that cable to ceiling outlets may be installed before gluing the HOMASOTE.

A careful study of the Simplified Method of Planning and these instructions indicates definitely the simplicity of Precision-Built construction. Outside of the fact that the walls and partitions are built sectionally, the framing lumber precut and no plaster is used, Precision-Built construction is the same as conventional construction. With this system there is the same degree of flexibility as with conventional construction, but the method employed makes for economy and speed. Anyone who will take the time to acquaint himself with the method we feel sure will find it not only extremely simple but most practical.



FRONT ELEVATION

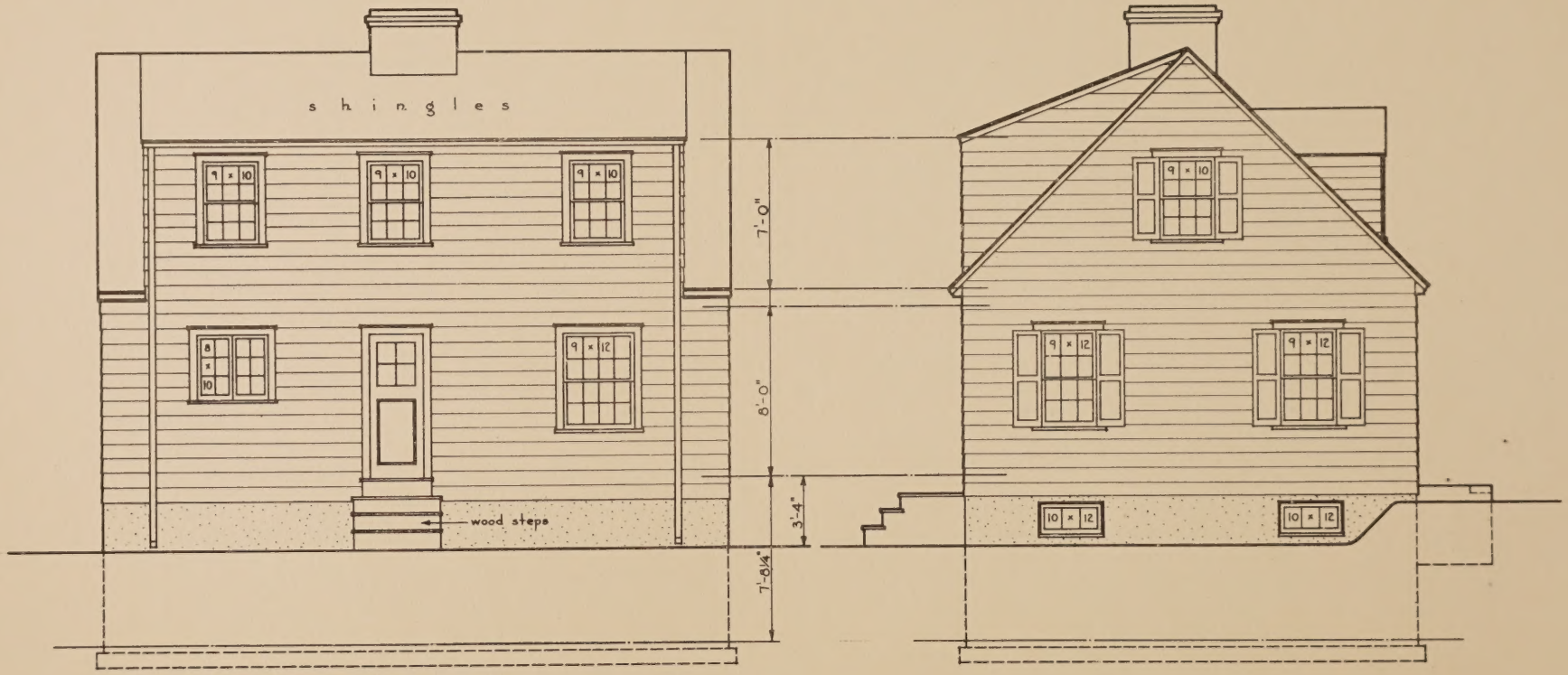
RIGHT SIDE ELEVATION

HOMASOTE COMPANY
TRENTON, NEW JERSEY
W HENRY NEUBECK . ARCHITECT

HOMASOTE
PRECISION-BUILT
HOME No 165

SCALE	DRAWN BY	CHECKED	DRAWING No.
¼"=1'-0"	W.H.N.		165-1
	APPROVED	DATE MAY 7, 1935	

CONTRACTOR SHALL CHECK ALL DIMENSIONS



REAR ELEVATION

LEFT SIDE ELEVATION

CONTRACTOR SHALL CHECK ALL DIMENSIONS

HOMASOTE COMPANY
TRENTON, NEW JERSEY
W. HENRY NEUBECK - ARCHITECT

HOMASOTE PRECISION-BUILT HOME No. 165

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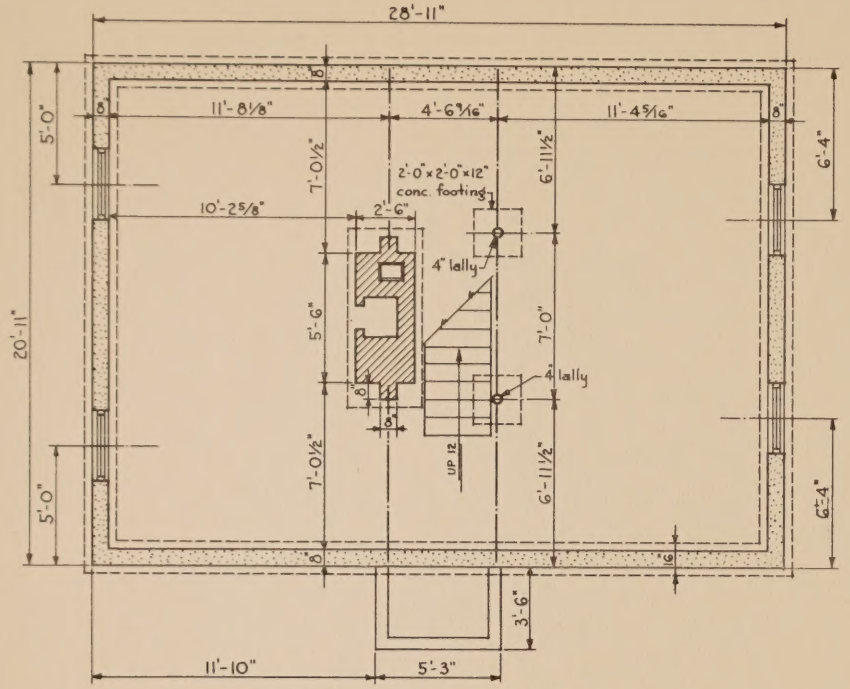
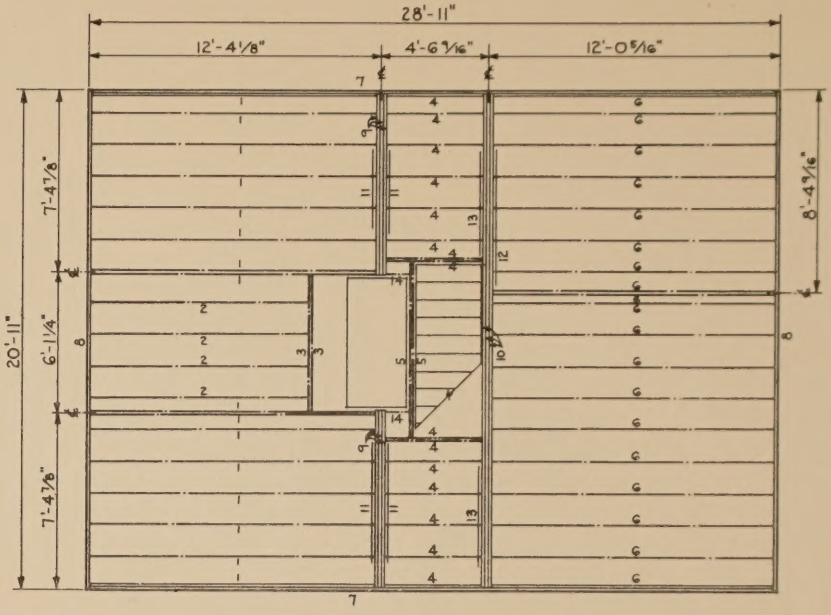
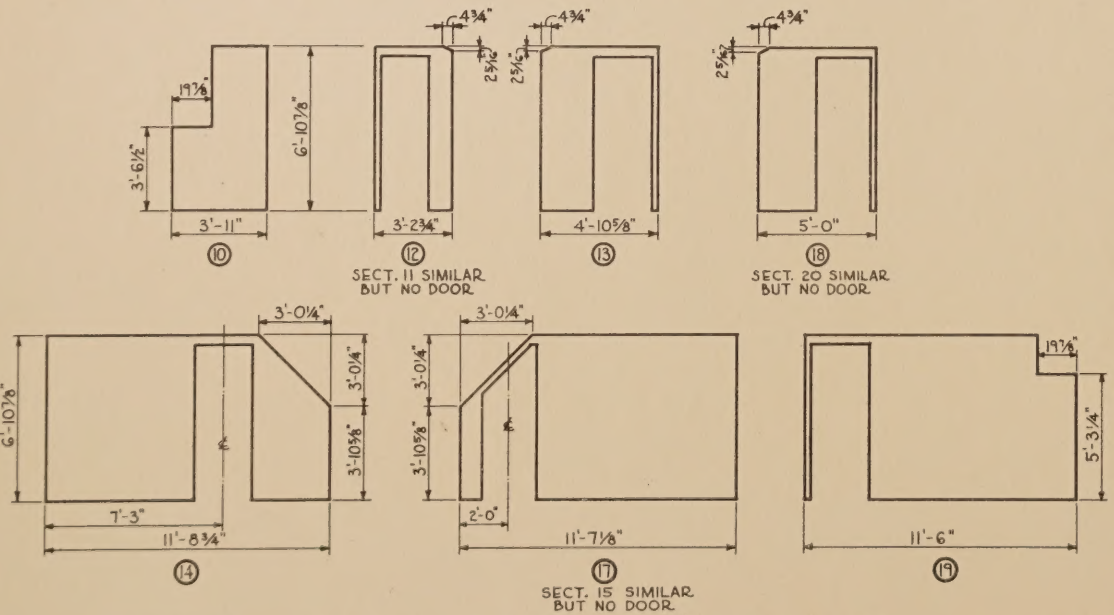
	APPROVED	DATE MAY 7, 1938	



BASEMENT PLAN



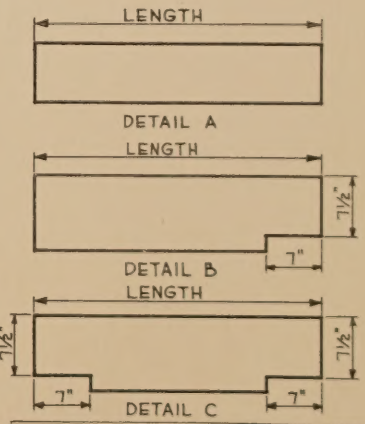
FIRST FLOOR FRAMING PLAN



SPECIAL SECTIONS FOR SECOND FLOOR

TABLE OF MEMBERS

MEMBER	STOCK	DETAIL	LENGTH	No. REQ'D.
1	2 × 8	A	12'-0"	16
2	"	A	8-11¾	4
3	"	A	5-10	2
4	"	A	4-1 1⁄16	15
5	"	A	7-5	2
6	"	A	11-8⅛	19
7	"	A	28-7¾	2
8	"	A	20-11	2
9	2 × 10	B	7-4⅞	6
10	"	C	20-7¾	3
11	2 × 3	A	6-10	4
12	"	A	19-5¾	1
13	"	A	6-0	2
14	2 × 8	A	1-1 5⁄16	2

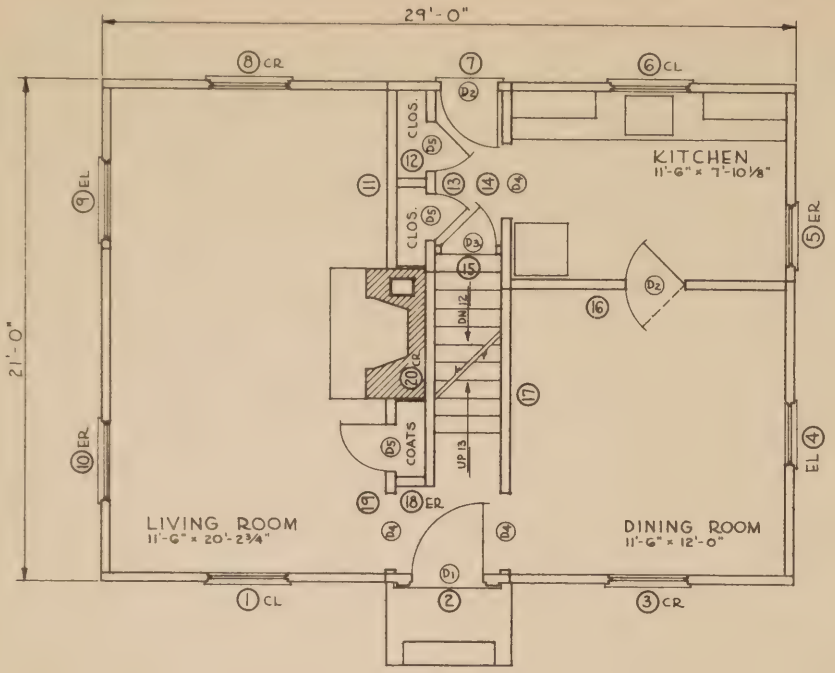


CONTRACTOR SHALL CHECK ALL DIMENSIONS

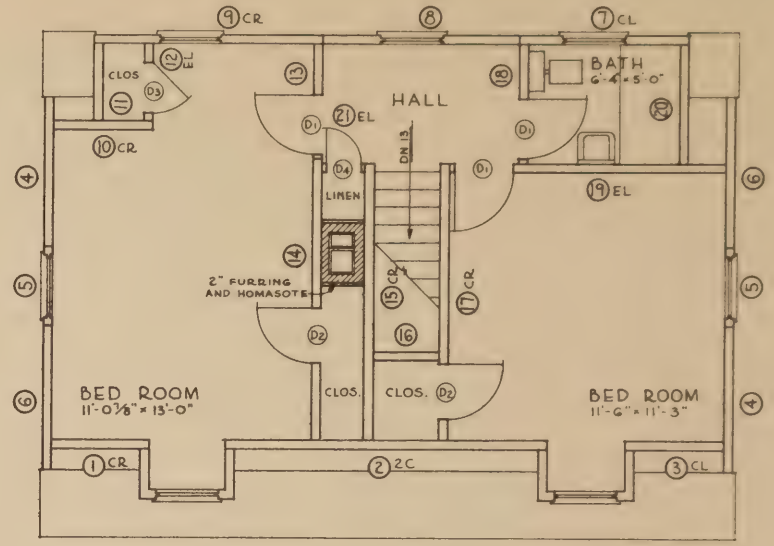
HOMASOTE COMPANY
TRENTON, NEW JERSEY
W. HENRY NEUBECK - ARCHITECT

HOMASOTE
PRECISION-BUILT
HOME No. 165

SCALE	DRAWN BY	CHECKED	DRAWING No.
¼"=1'-0"	W.H.N.		165-3
	APPROVED	DATE MAY 7, 1938	



FIRST FLOOR PLAN



SECOND FLOOR PLAN

TABLE OF SECTIONS
OPENINGS DIMENSIONED FROM LEFT END OF NUMBERED SIDE OF SECTION

	HEIGHT	LENGTH	END TO C	C TO C		
1	8'-0"	11'-10⅛"	6'-1⅛"			
2	"	5-2¾	2-7⅜			
3	"	11-10⅛	5-9			
4	"	12-4⅝	6-0			
5	"	7-10⅛	1-10⅛			
6	"	11-10⅛	6-1⅛			
7	"	5-2¾	1-9⅛			
8	"	11-10⅛	5-9			
9	"	6-8⅜	4-7¼			
10	"	13-6⅜	8-11⅛			
11	"	7-4⅜				
12	"	1-3⅞				
13	"	7-7⅜	2-4	3-0		
14	"	8-2¾	3-9			
15	BUILD	CONVENTIONALLY				
16	8'-0"	11-6	5-9			
17	"	12-0	1-9			
18	"	1-3⅞				
19	"	7-4⅜	2-1	3-6⅜		
20	"	8-11½				

DOOR SCHEDULE

DOOR	SIZE	REQ'D.
D1	3'-0" x 6'-8"	1
D2	2-6 x 6-8	2
D3	2-4 x 6-8	1
D4	3-0 x 6-8 CASED OPENING	3
D5	2-0 x 6-8	3

TABLE OF SECTIONS
OPENINGS DIMENSIONED FROM LEFT END OF NUMBERED SIDE OF SECTION

	HEIGHT	LENGTH	END TO C	C TO C		
1	3-6½	4-1⅝				
2	"	13-5				
3	"	4-1⅝				
4	SEE GABLE END SECTIONS - SHEET N° 165-6					
5	"	"	"	"	"	"
6	"	"	"	"	"	"
7	6-6¾	7-0¾	3-10⅛			
8	"	8-1⅝	4-6½			
9	"	9-9⅝	5-11½			
10	SEE SPECIAL	SECTIONS - SHEET N° 165-3				
11	"	"	"		"	"
12	"	"	"		"	"
13	"	"	"		"	"
14	"	"	"		"	"
15	"	"	"		"	"
16		2-9				
17	SEE SPECIAL	SECTIONS - SHEET N° 165-3				
18	"	"	"		"	"
19	"	"	"		"	"
20	SEE SPECIAL	SECTIONS - SHEET N° 165-3				
21	6-10⅞	1-9				

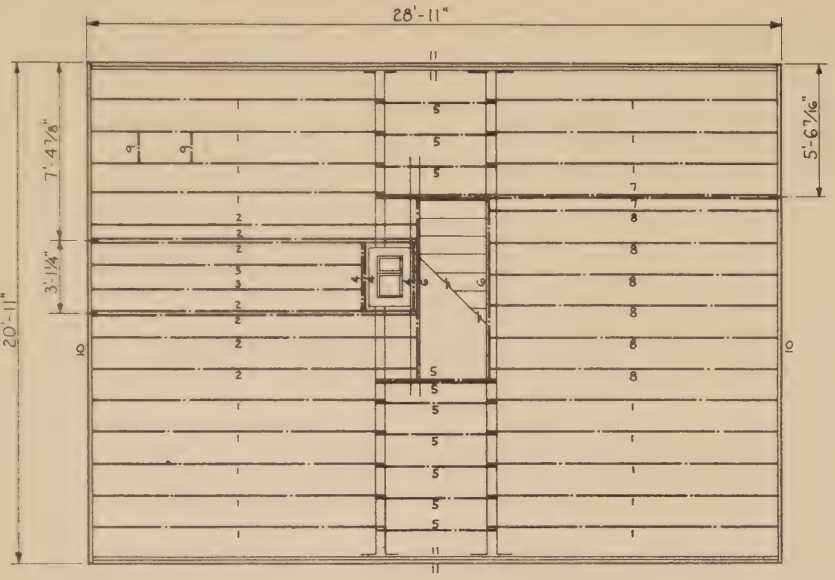
DOOR SCHEDULE

DOOR	SIZE	REQ'D.
D1	2'-6" x 6'-6"	3
D2	2-4 x 6-6	2
D3	2-0 x 6-6	1
D4	1-4 x 6-6	1

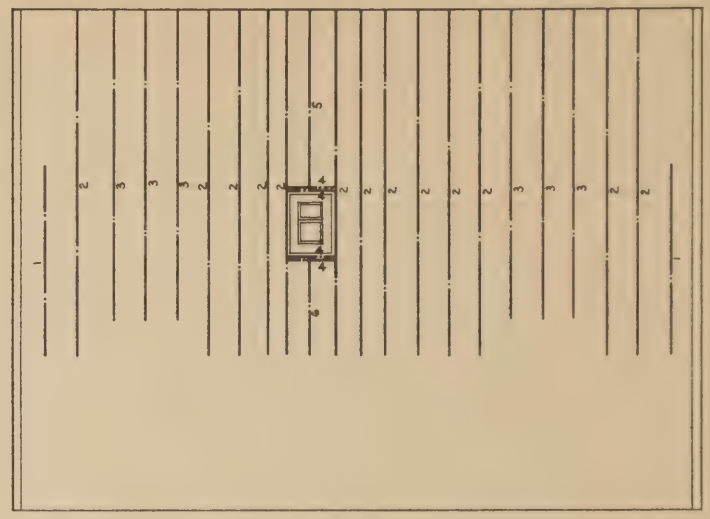
HOMASOTE COMPANY
TRENTON, NEW JERSEY
W. HENRY NEUBECK - ARCHITECT

HOMASOTE
PRECISION-BUILT
HOME No. 165

SCALE	DRAWN BY	CHECKED	DRAWING No.
¼" = 1'-0"	W.H.N.		165-4
	DATE	MAY 7, 1938	



SECOND FLOOR FRAMING PLAN

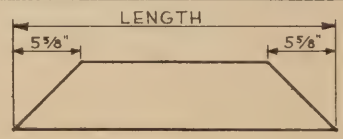


SECOND FLOOR CEILING FRAMING

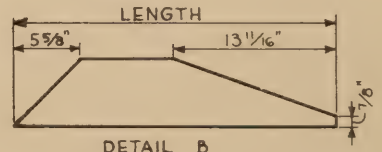
TABLE OF MEMBERS

MEMBER	SIZE	DETAIL	LENGTH	NO. PCS.
1	2 × 8		12'-0"	17
2	"		13-7½	7
3	"		11-4¾	2
4	"		2-10	3
5	"	ALL SQUARE ENDS	5-3	10
6	"		7-5½	2
7	"		17-0	2
8	"		11-11	6
9	"		1-2⅜	2
10	"		20-11	2
11	"		28-7¾	4

MEMBER	SIZE	DETAIL	LENGTH	NO. PCS.
1	2 × 6	A	8'-3½"	2
2	"	B	14-6⅛	13
3	"	C	12-8¹³⁄₁₆	6
4	"	E	2-1	4
5	"	C	7-3¾	1
6	"	D	3-10⅜	1



DETAIL A



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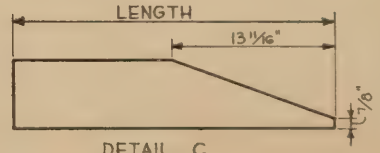

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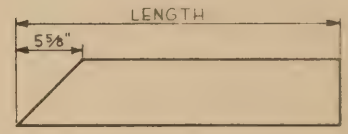

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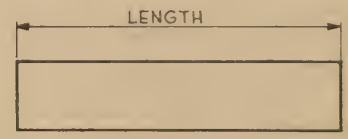


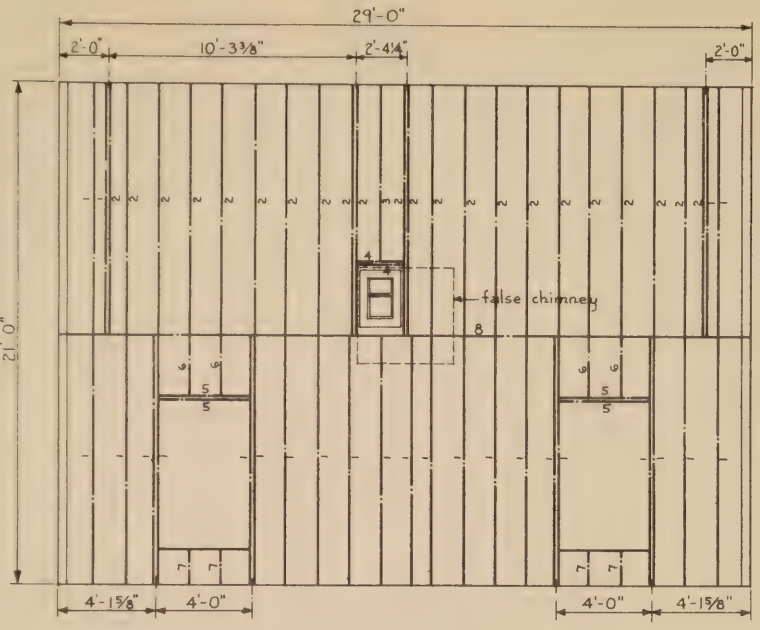
DETAIL E

CONTRACTOR SHALL CHECK ALL DIMENSIONS

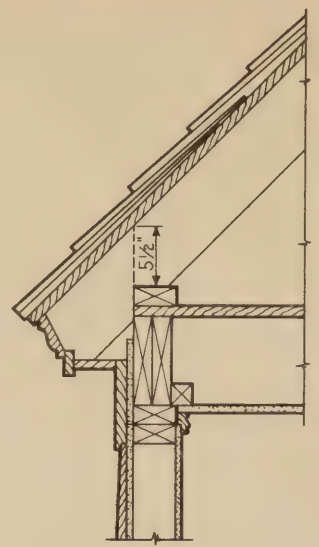
HOMASOTE COMPANY
TRENTON, NEW JERSEY
W. HENRY NEUBECK - ARCHITECT

HOMASOTE
PRECISION-BUILT
HOME No. 165

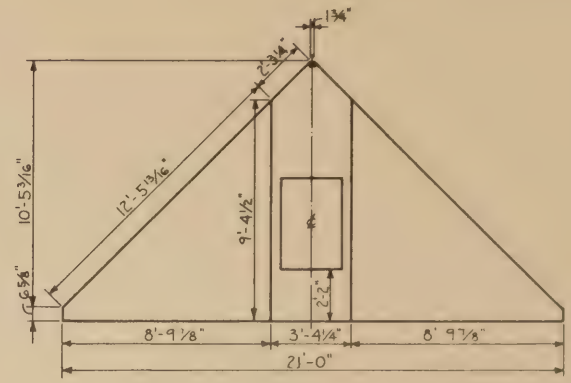
SCALE	DRAWN BY	CHECKED	DRAWING No.
1/4"=1'-0"	W.H.N.		165-5
	APPROVED	DATE MAY 7, 1938	



ROOF FRAMING PLAN



CORNICE DETAIL

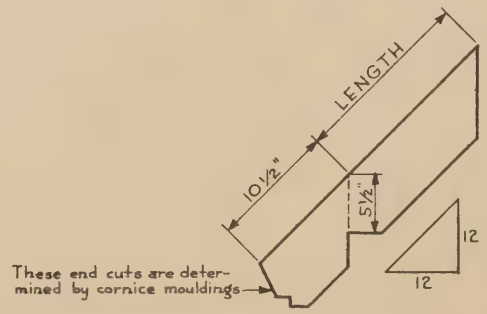


④ ⑤ ⑥

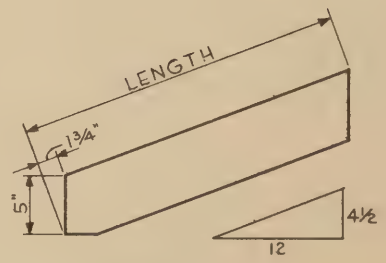
DETAIL OF GABLE END SECTIONS
Two of each required

TABLE OF MEMBERS

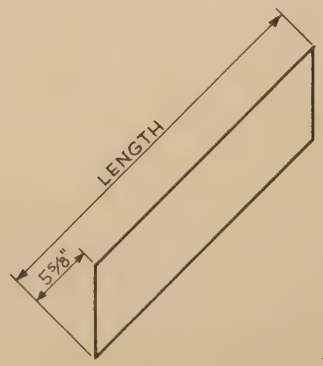
MEMBER	SIZE	DETAIL	LENGTH	NO. REQ'D
1	2 × 6	A	14'-8 7/16"	25
2	"	C	11-3½	22
3	"	C	7-11½	1
4	2 × 8	D	2-1	2
5	"	D	3-8¾	4
6	2 × 6	B	3-6 1/16	4
7	"	A	2-0 13/16	4
8	2 × 8	D	28-11	1



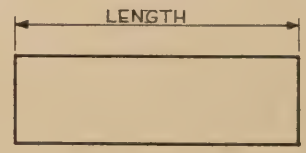
DETAIL A



DETAIL C



DETAIL B

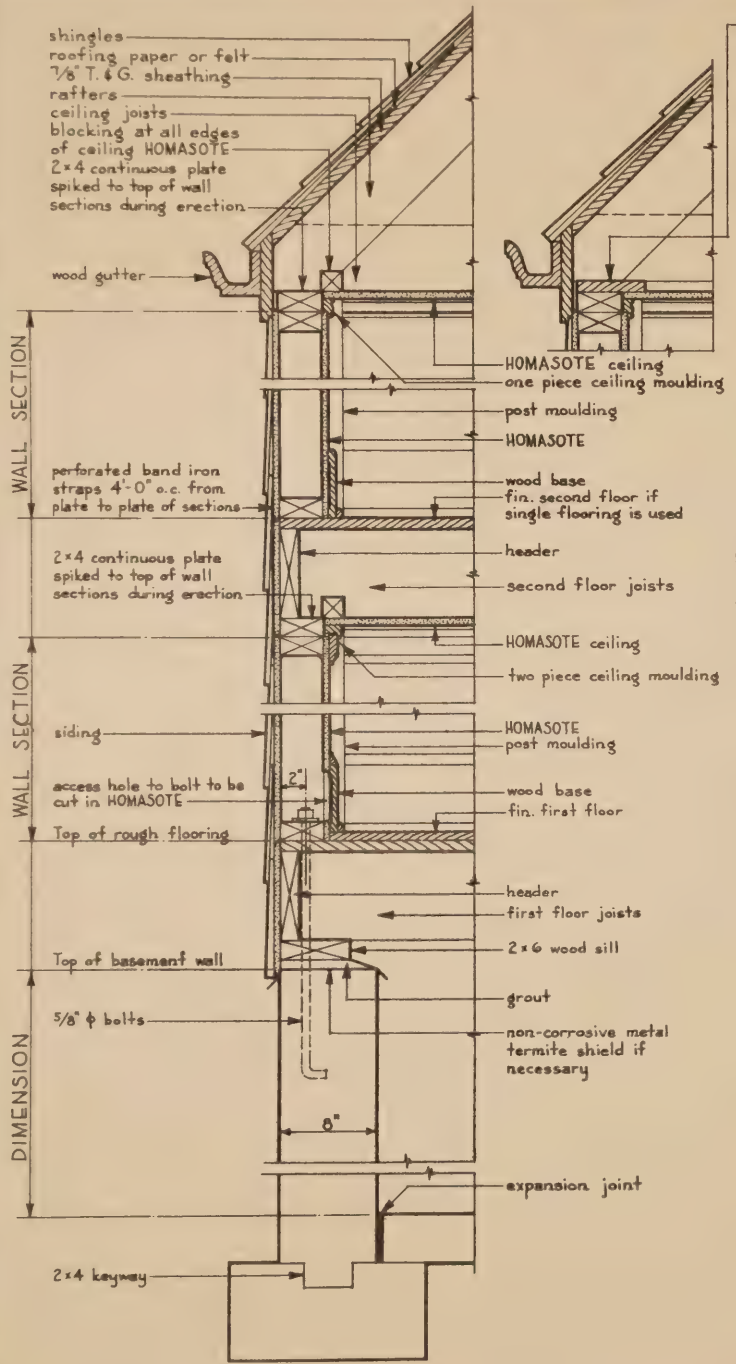


DETAIL D

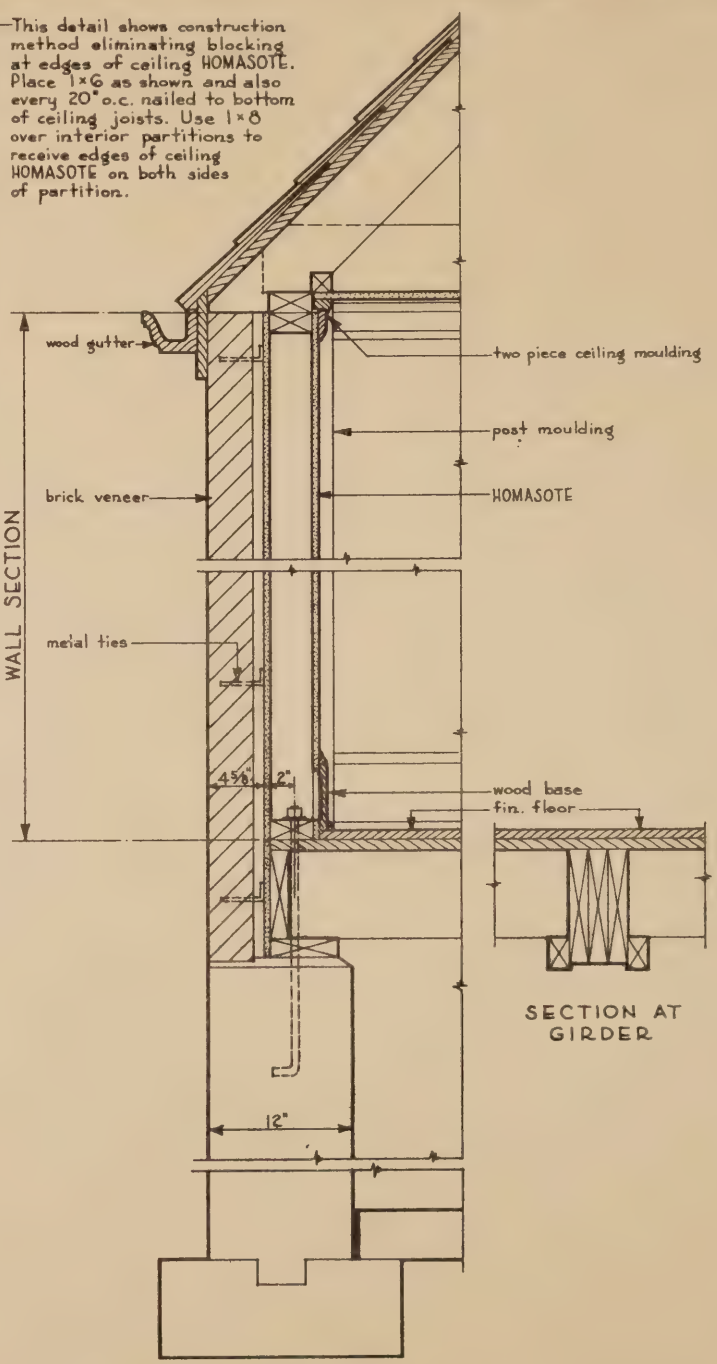
HOMASOTE COMPANY
TRENTON, NEW JERSEY
W. HENRY NEUBECK - ARCHITECT

HOMASOTE
PRECISION-BUILT
HOME No. 165

SCALE	DRAWN BY	CHECKED	DRAWING No.
¼"=1'-0"	W.H.N.		165-6
	APPROVED	DATE	
		MAY 7, 1938	

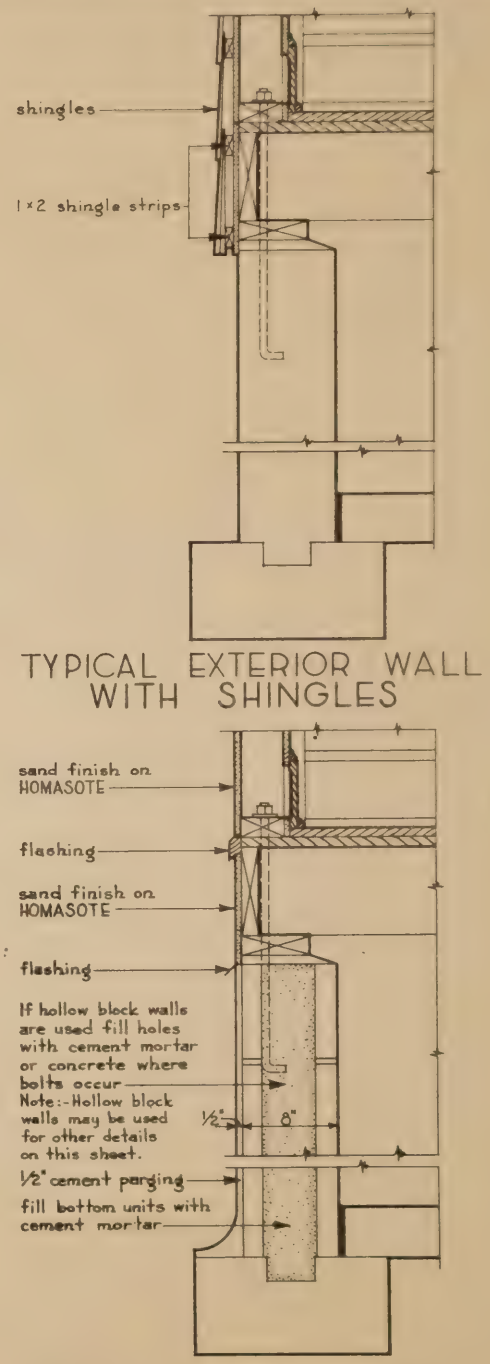


TYPICAL SECTION THRU EXTERIOR WALL



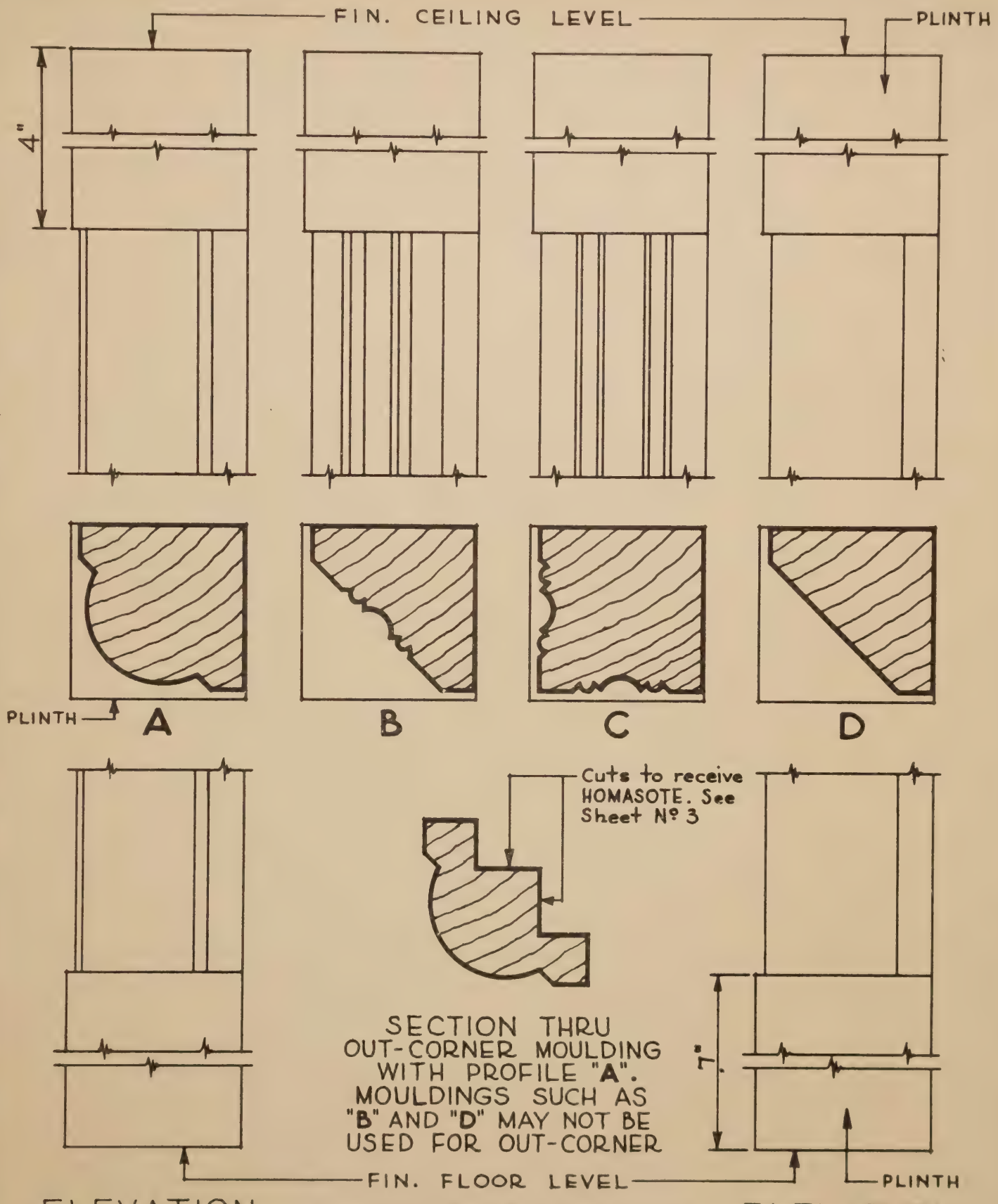
SECTION AT GIRDER

TYPICAL SECTION THRU BRICK VENEER WALL



TYPICAL EXTERIOR WALL WITH SHINGLES

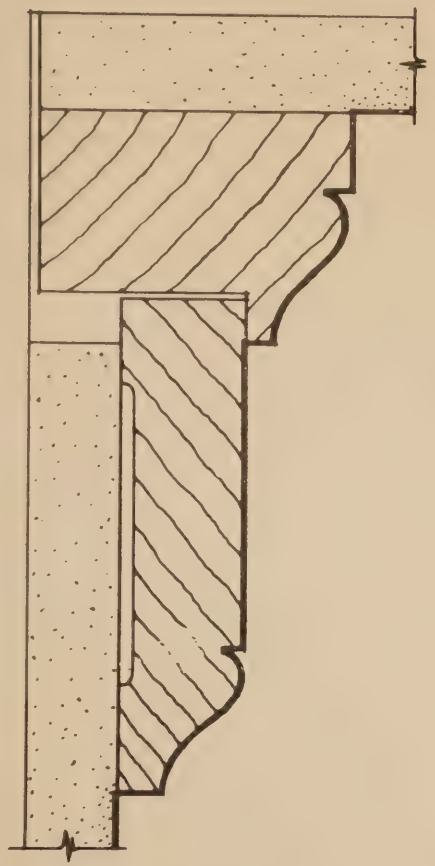
TYPICAL EXTERIOR WALL WITH SAND FINISH



NOTE:- HEIGHTS OF PLINTH BLOCKS MAY VARY TO AGREE WITH CEILING MOULDINGS AND BASES OTHER THAN THOSE SHOWN ON SHEET Nº 1

F. S. DETAILS OF POST MOULDINGS

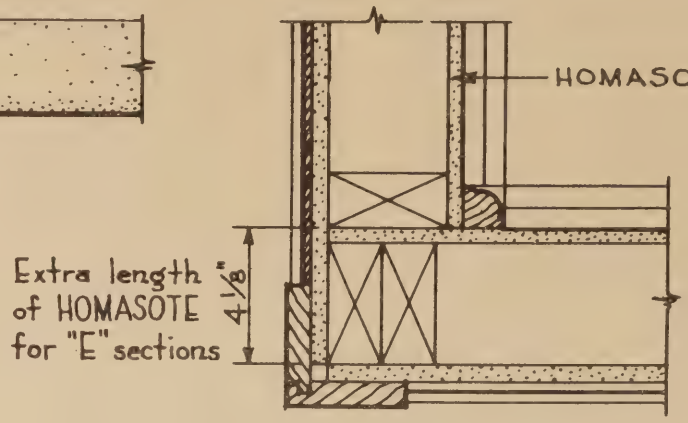
ALSO SEE SHEETS Nºs. 3 AND 4



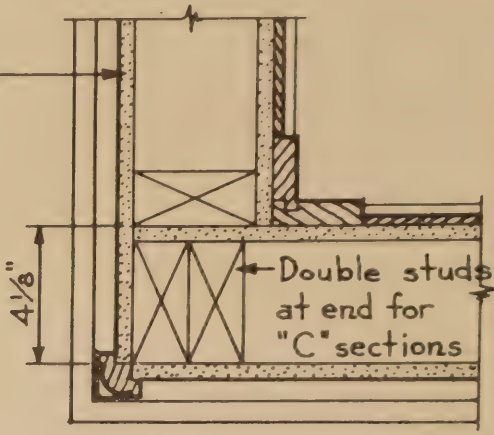
F.S. DETAIL OF TWO PIECE CEILING MOULDING

F.S. DETAIL OF ONE PIECE CEILING MOULDING

Note:- Other profiles may be used, but for successful results the mouldings must be rabbeted as shown to permit direct nailing to continuous plate and also allow for expansion and contraction of HOMASOTE on both ceiling and side walls. Also see sheets Nos. 1 and 4.

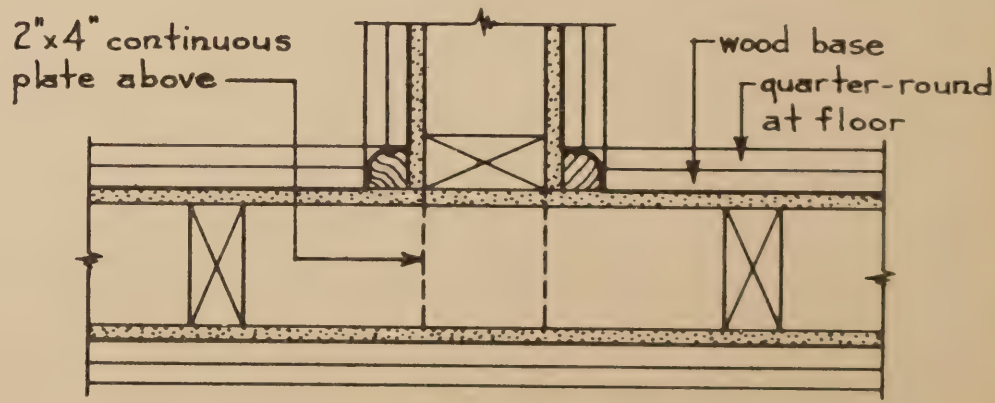


DETAIL OF TYPICAL EXTERIOR OUT-CORNER
Showing interior in-corner post moulding

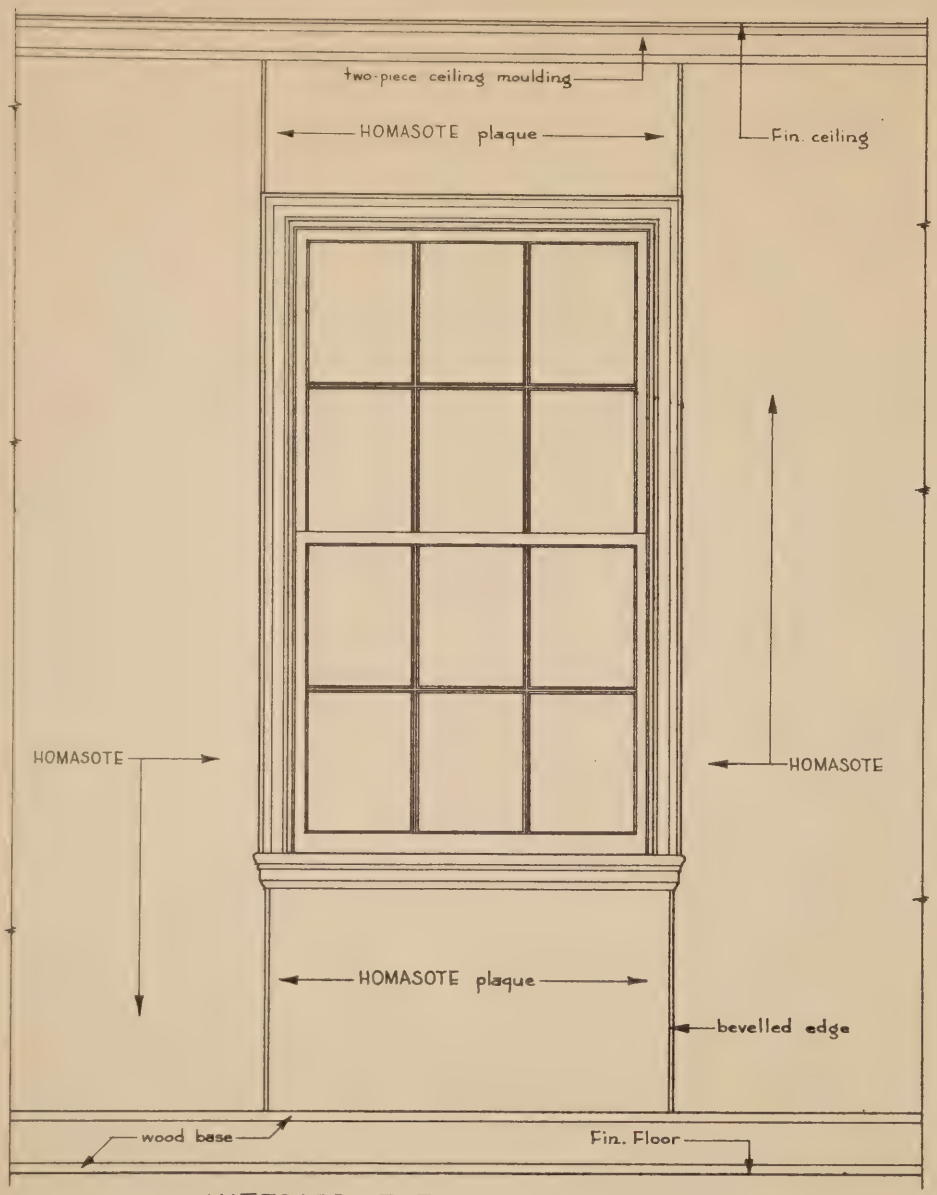


DETAIL OF TYPICAL EXTERIOR IN-CORNER
Showing interior out-corner post moulding

Note:- See "Instructions for Sectionalizing" for correct markings of wall sections at corners.



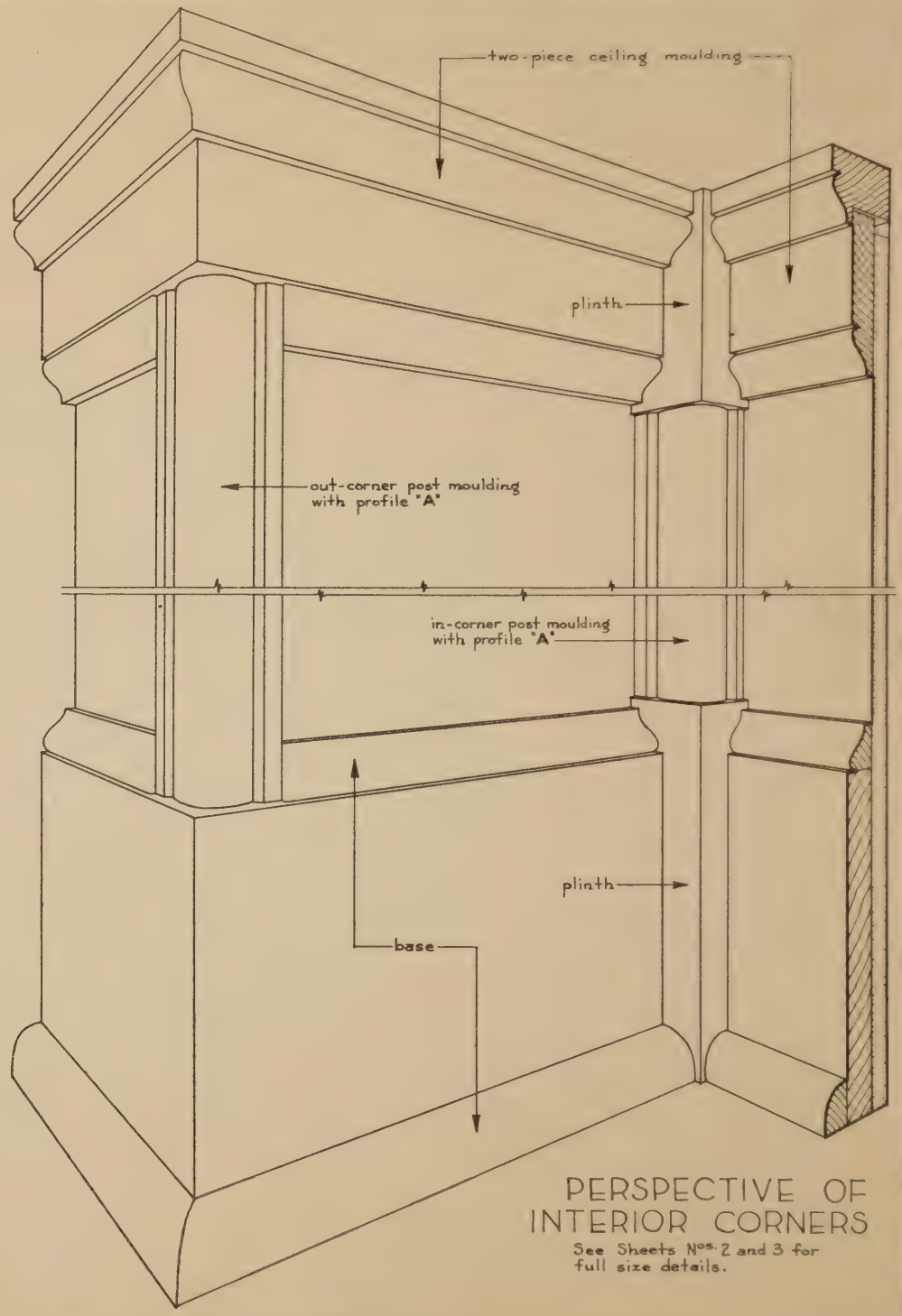
DETAIL OF TYPICAL PERPENDICULAR INTERSECTION



INTERIOR ELEVATION OF WINDOW

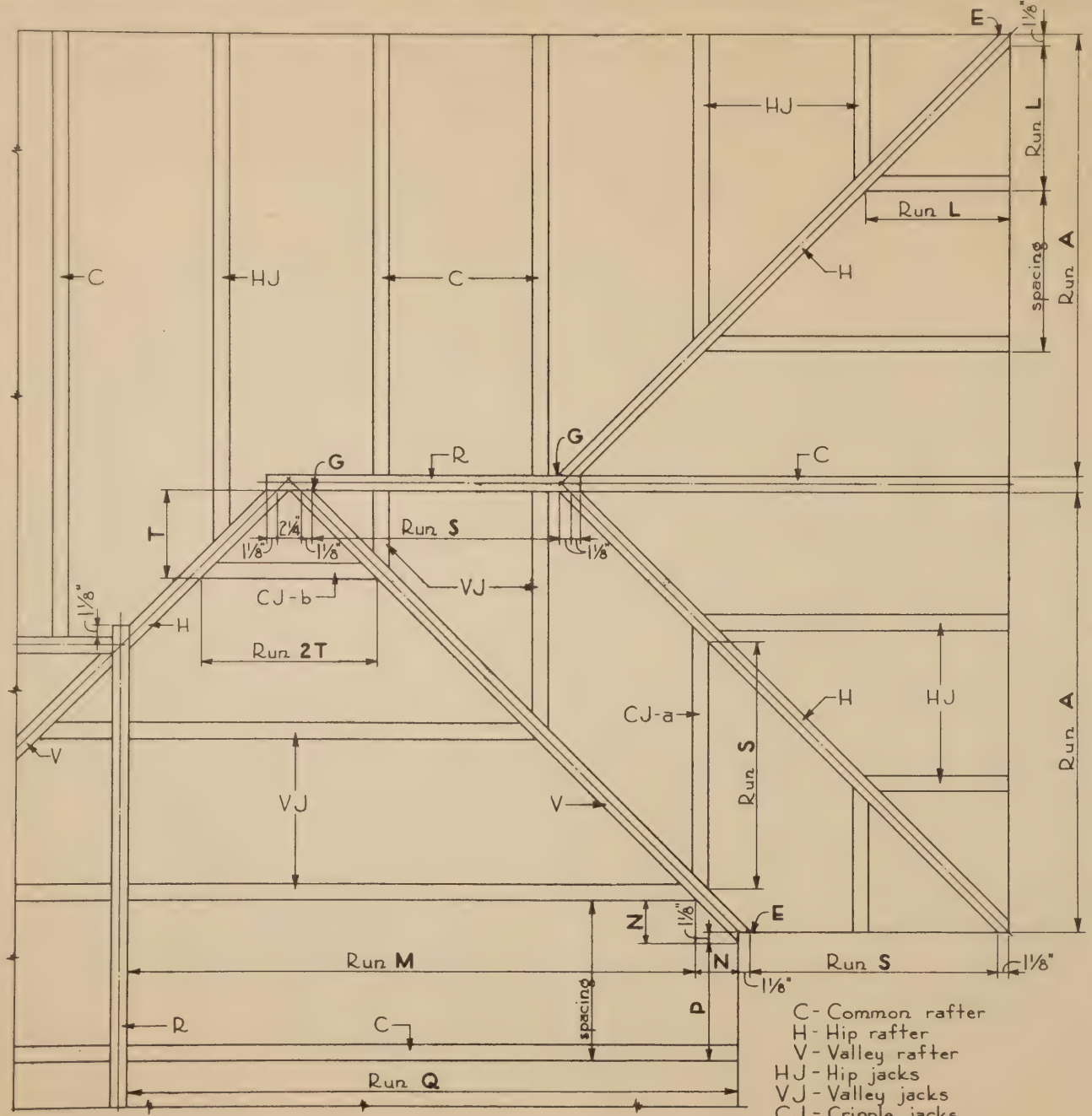
· NOTES ·

If length of wall exceeds 14'-0", it is necessary to have a joint in the HOMASOTE. If possible, the design should be arranged so that such a joint occurs at a window or door and can be covered by a HOMASOTE plaque or plaques as shown above. Plaques are to be glued to the interior HOMASOTE with SOTE glue and nailed with a few finishing nails to hold plaques in place until glue sets.



PERSPECTIVE OF INTERIOR CORNERS

See Sheets Nos. 2 and 3 for full size details.



C - Common rafter
H - Hip rafter
V - Valley rafter
HJ - Hip jacks
VJ - Valley jacks
CJ - Cripple jacks
R - Ridge

FIG. 1 - PLAN OF ROOF

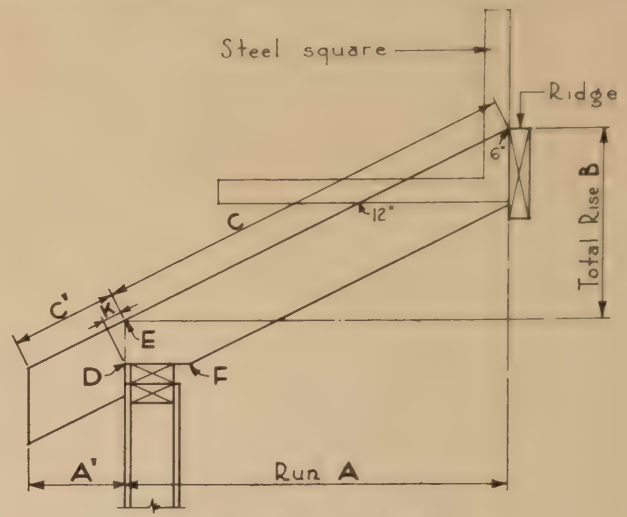


FIG. 2 - COMMON RAFTER

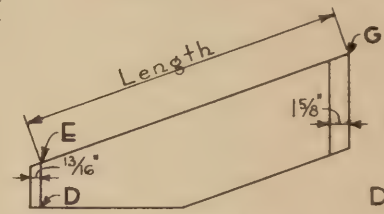


FIG. 3 - HIP RAFTER

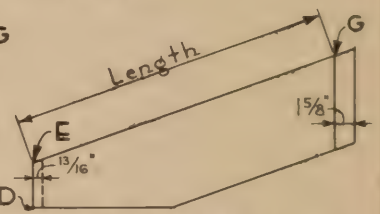


FIG. 4 - VALLEY RAFTER

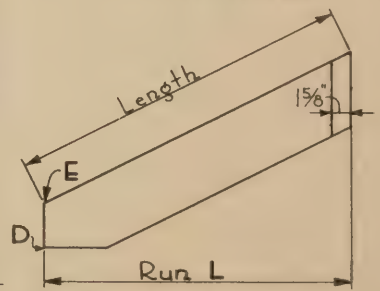


FIG. 5 - HIP JACK RAFTER

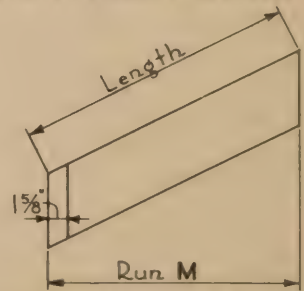


FIG. 6 - VALLEY JACK RAFTER

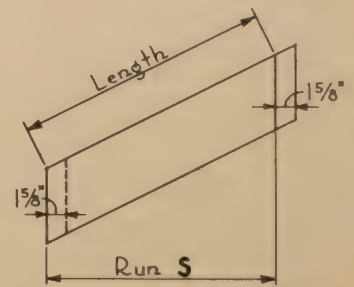


FIG. 7 - CRIPPLE JACK "a"

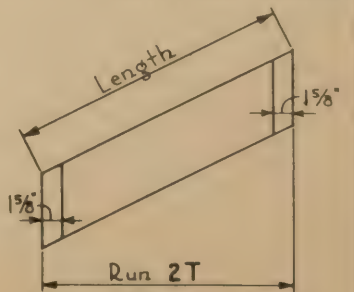
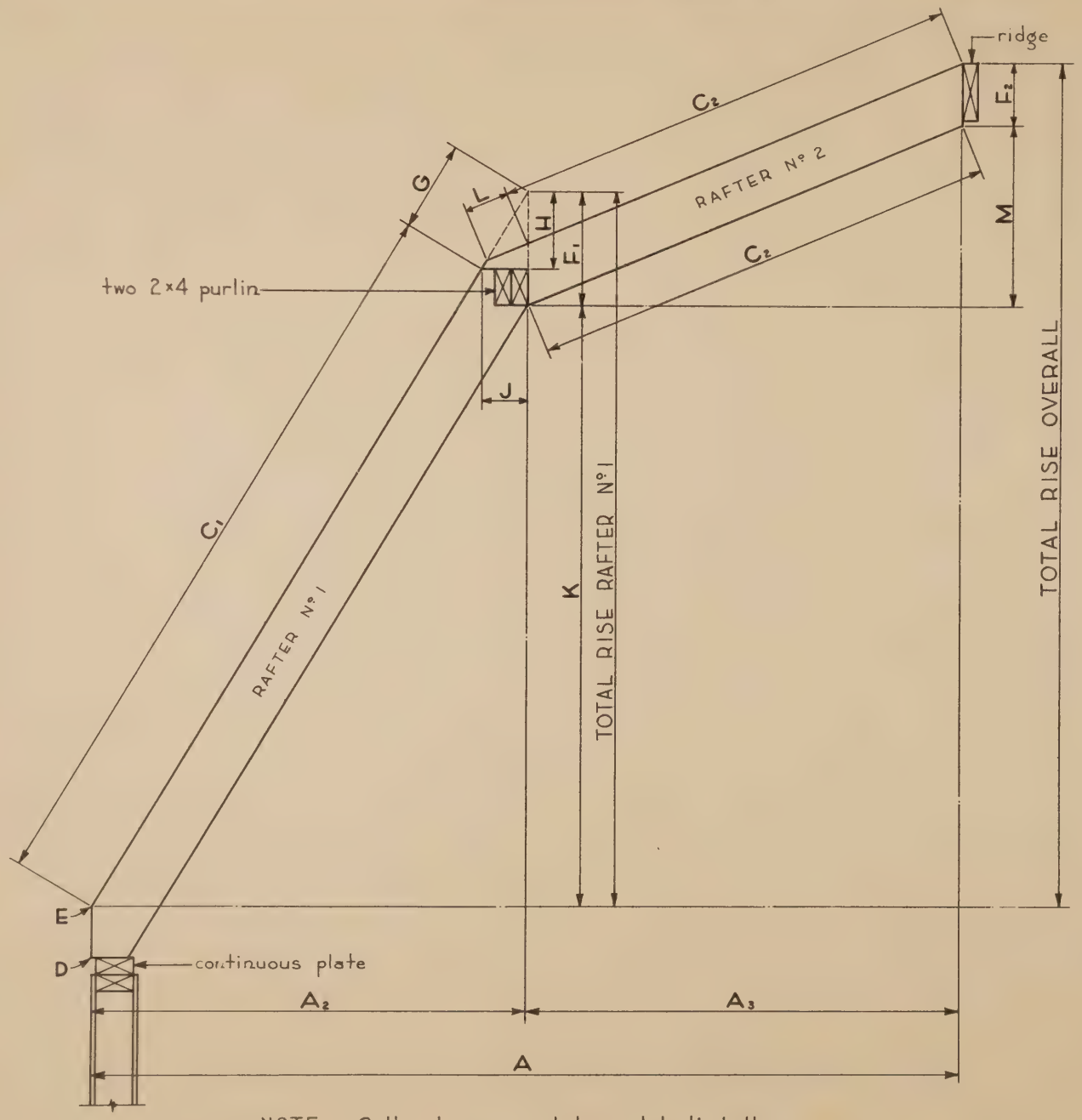


FIG. 8 - CRIPPLE JACK "b"



NOTE :- Collar beams must be used to tie both rafters to those on opposite side of ridge.

The lengths and cuts of gambrel rafters are found as follows:

RAFTER N° 1

The cuts at the end resting on the continuous plate are determined by the same method as used for common rafters.

F1 is the dimension measured along a plumb cut and is found from the table for Common and Jack Rafters (for the selected rise) if the depth of the rafter is used as the run.

Example 1

Rafter is 2×6 (1⅝"×5⅝" actual size)
Rise 20"

Run		Length (from table)
5"	-	9¾"
0⅝"	-	1¼"
5⅝"	-	11" dimension **F1**

H equals **F1** minus 3⅝" (1⅝"×3⅝" actual size of 2×4 purlins).

J is the run if **H** is the total rise.

Example 2

H equals 7⅜" Rise 20"

Total rise		Run (from table)
7"	-	4⅝"
0⅜"	-	0 3/16"
7⅜"	-	4½" dimension **J**

To find length **C1**, dimension **A2** must first be set by the designer. Then **C1** plus **G** is found from the table of Common and Jack Rafters (for the selected rise) if **A2** is the run. **G** is found from the same table if **J** is the run.

RAFTER N° 2

Find **C2** **A3** equals **A** minus **A2**. **C2** is found from the table of Common and Jack Rafters (for the selected rise of Rafter N° 2) if **A3** is the run.

Find **L** Let **R1** equal rise of Rafter N°1.
R2 " " " " N°2.
X equal the length of a common rafter with rise **R2** and a 12" run.
F2 is found from the table of Common and Jack Rafters (for rise **R2**) if the depth of the rafter is used as the run.

Then $\mathbf{L} = \frac{\text{X multiplied by } (\mathbf{F_1} \text{ minus } \mathbf{F_2})}{\mathbf{R_1} \text{ minus } \mathbf{R_2}}$

Example 3

$R_1 = 20"$ $R_2 = 5"$ $X = 13"$ $F_1 = 11"$ $F_2 = 6\frac{1}{8}"$

Then $\mathbf{L} = \frac{13(11 - 6\frac{1}{8})}{20 - 5} = 4\frac{1}{4}"$

M = total rise of Rafter N°2 if **A3** is the run.
K = " " " " N°1 minus **F1**.
Therefore the Total Rise Overall = **K** + **M** + **F2**.

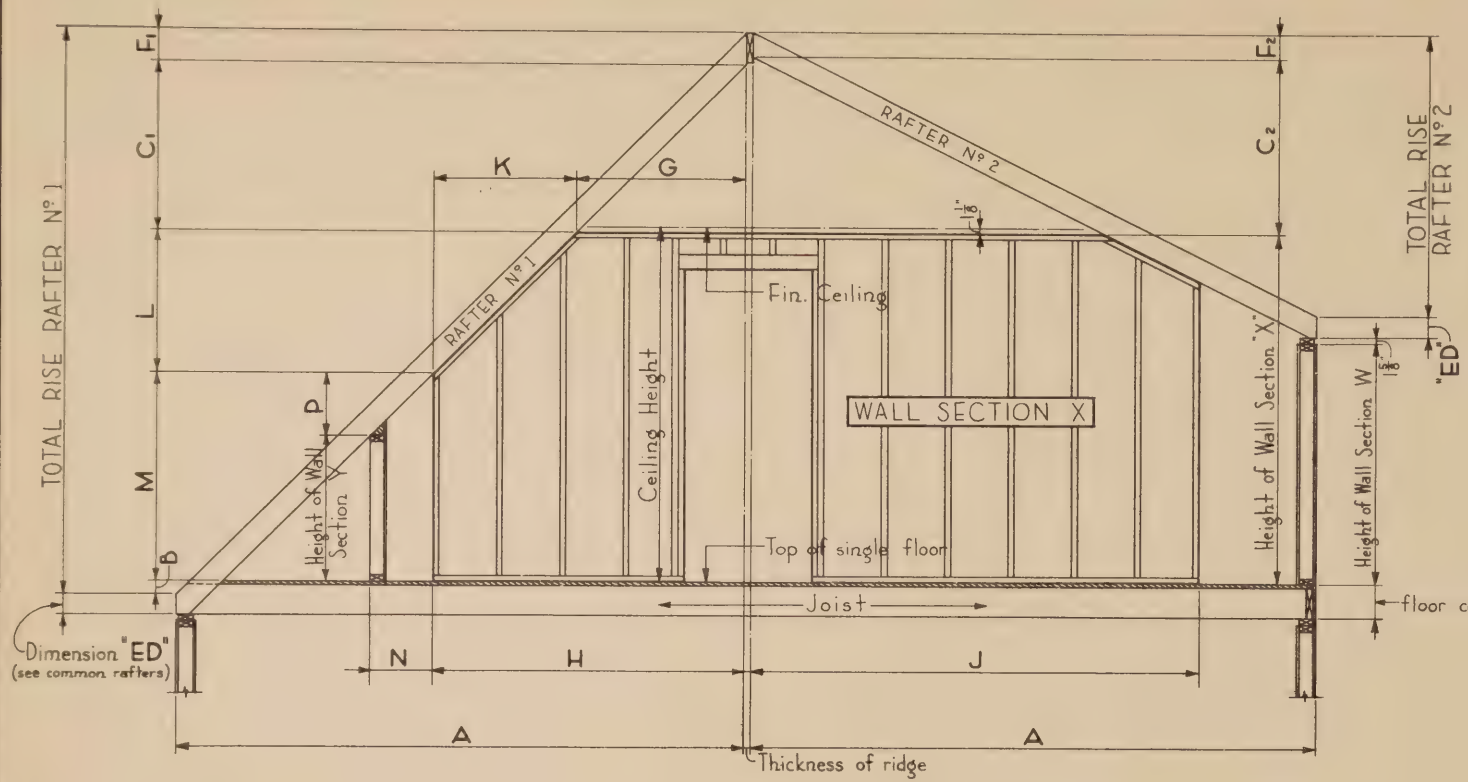
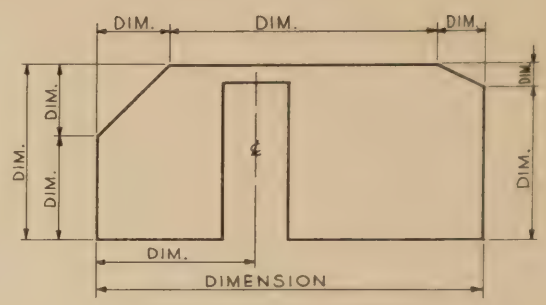
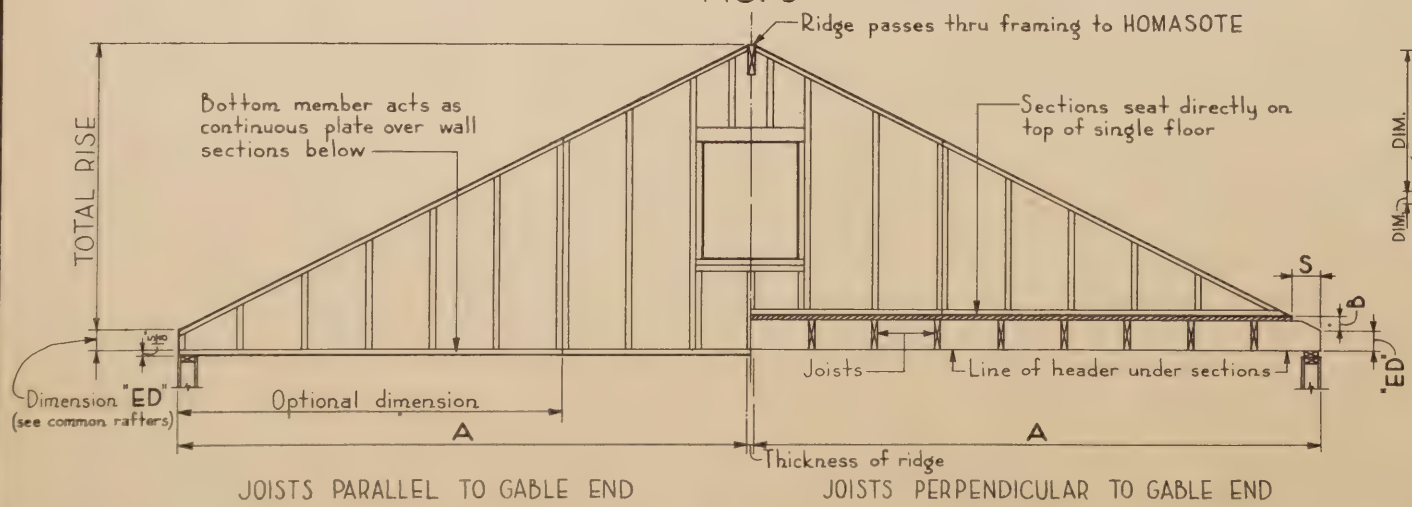


FIG. 9



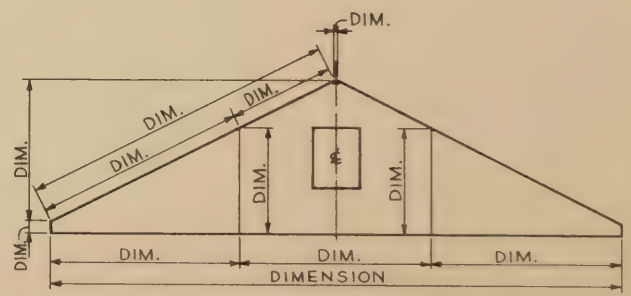
WALL SECTION NUMBER

FIG. 10



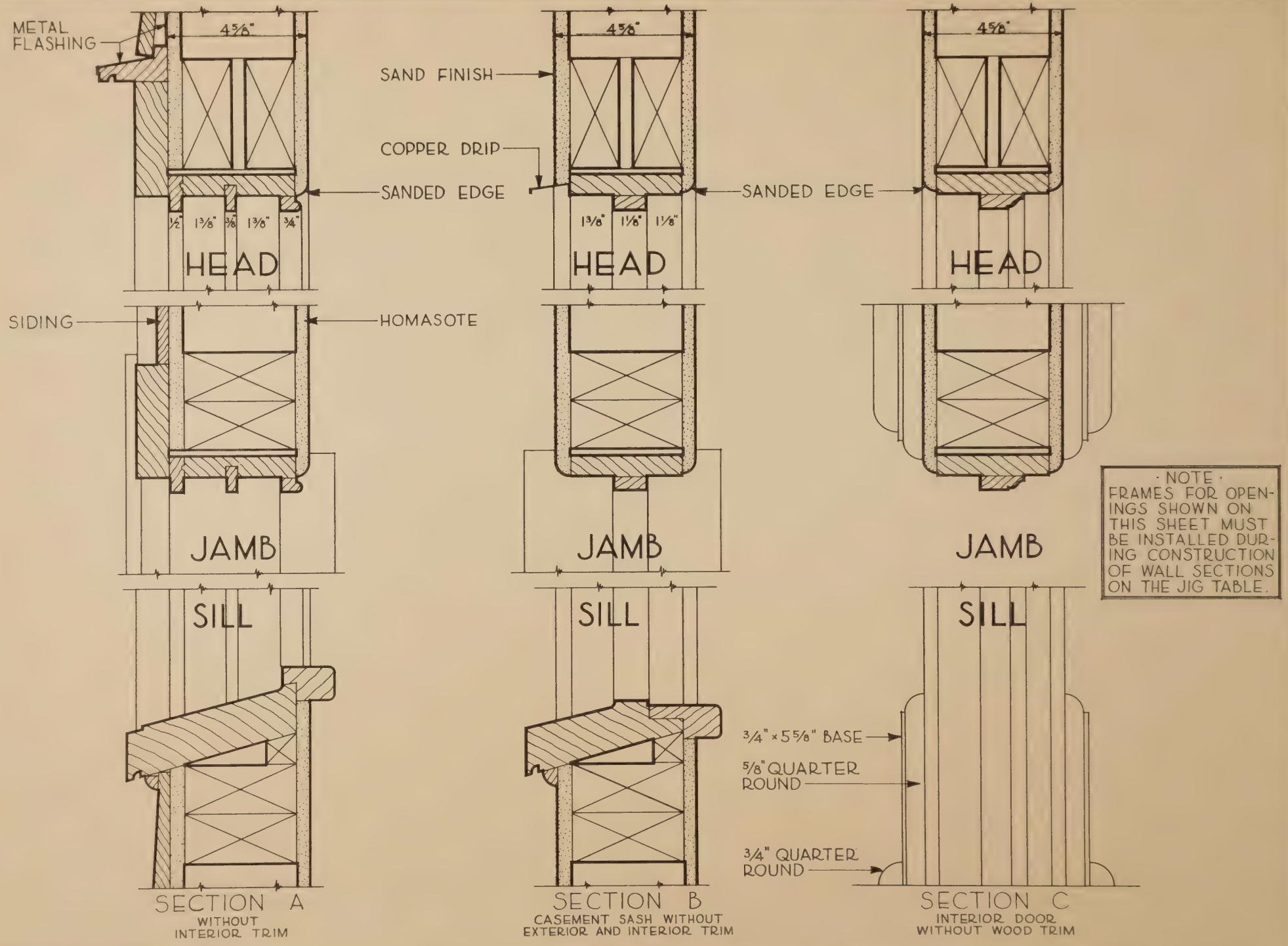
JOISTS PARALLEL TO GABLE END JOISTS PERPENDICULAR TO GABLE END

FIG. 11



IDENTIFICATION

FIG. 12

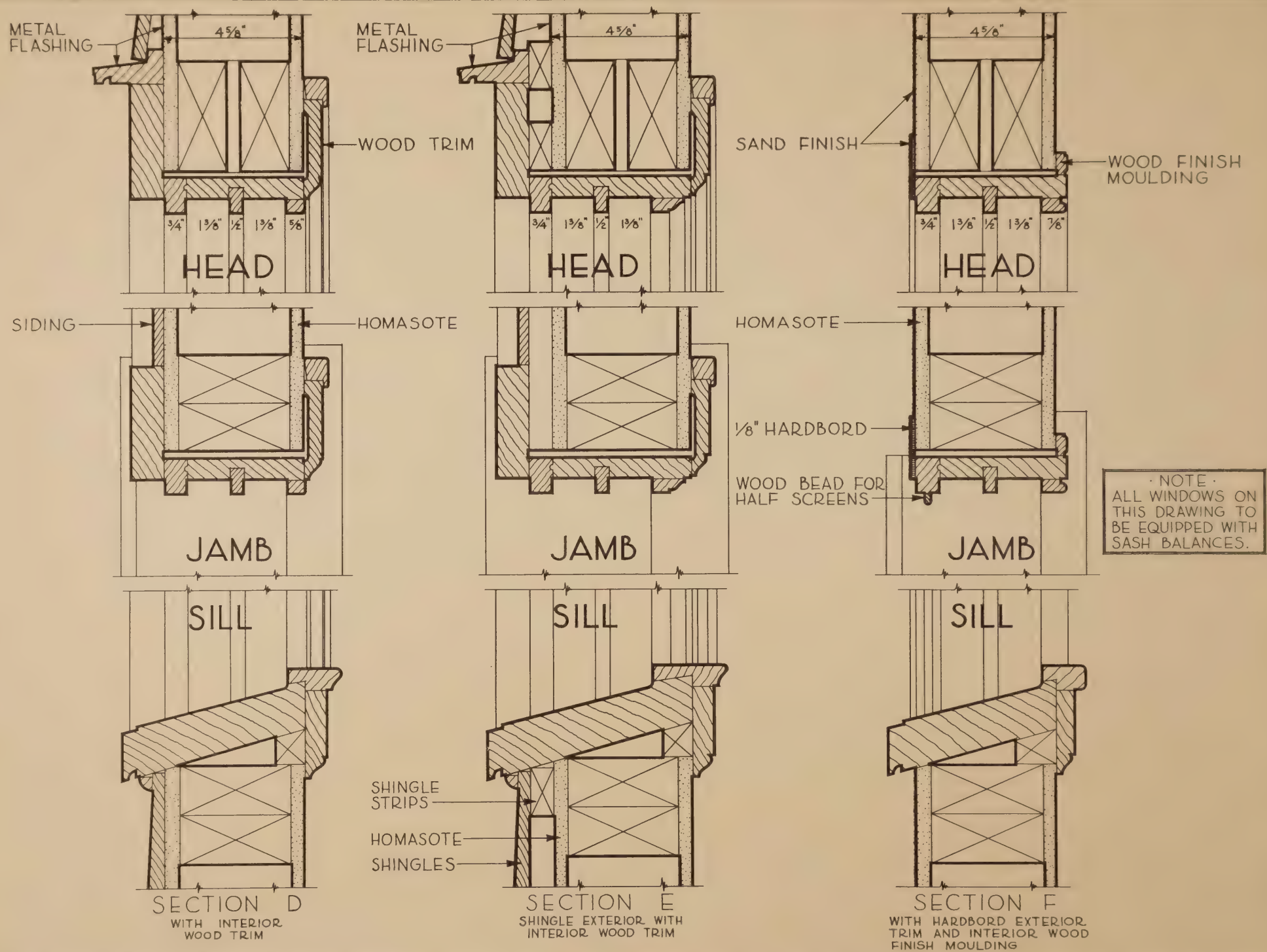


SECTION A
WITHOUT INTERIOR TRIM

SECTION B
CASEMENT SASH WITHOUT EXTERIOR AND INTERIOR TRIM

SECTION C
INTERIOR DOOR WITHOUT WOOD TRIM

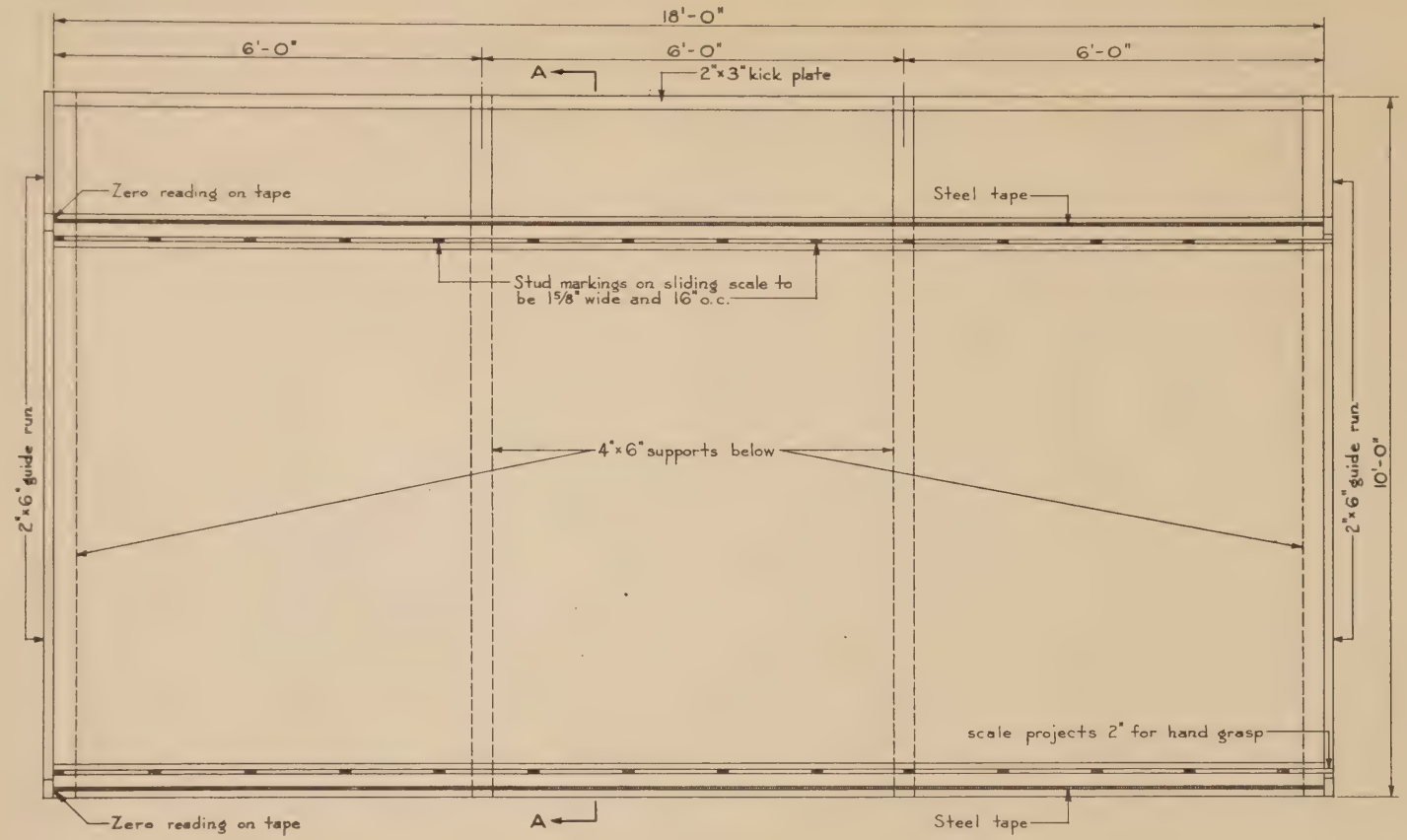
· NOTE ·
FRAMES FOR OPENINGS SHOWN ON THIS SHEET MUST BE INSTALLED DURING CONSTRUCTION OF WALL SECTIONS ON THE JIG TABLE.


METAL FLASHING
4 5/8"
WOOD TRIM
3/4" 1 3/8" 1/2" 1 3/8" 5/8"
HEAD
SIDING
HOMASOTE
JAMB
SILL
SECTION D
WITH INTERIOR WOOD TRIM
METAL FLASHING
4 5/8"
3/4" 1 3/8" 1/2" 1 3/8"
HEAD
JAMB
SILL
SHINGLE STRIPS
HOMASOTE
SHINGLES
SECTION E
SHINGLE EXTERIOR WITH INTERIOR WOOD TRIM
SAND FINISH
4 5/8"
WOOD FINISH MOULDING
3/4" 1 3/8" 1/2" 1 3/8" 7/8"
HEAD
HOMASOTE
1/8" HARDBORD
WOOD BEAD FOR HALF SCREENS
JAMB
SILL
SECTION F
WITH HARDBORD EXTERIOR TRIM AND INTERIOR WOOD FINISH MOULDING
· NOTE ·
ALL WINDOWS ON THIS DRAWING TO BE EQUIPPED WITH SASH BALANCES.

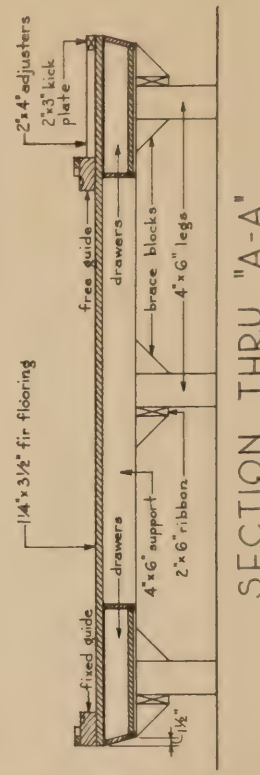
JIG TABLE

HOMASOTE PRECISION-BUILT HOMES

SHEET Nº A

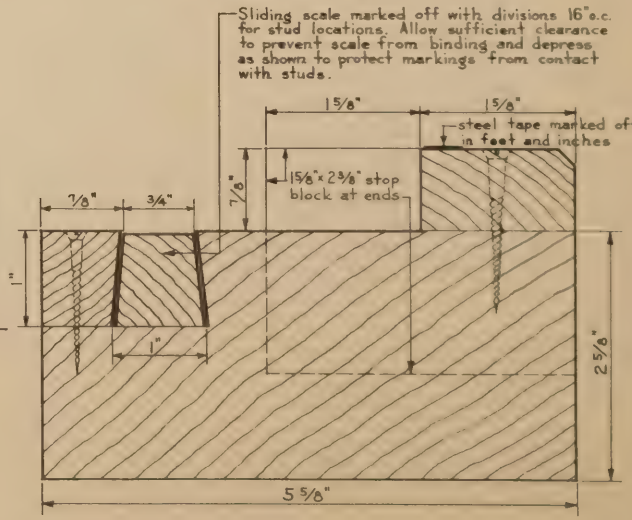


PLAN



SECTION THRU "A-A"

ELEVATION



PATENT APPLIED FOR

HOMASOTE COMPANY - TRENTON, NEW JERSEY

W. HENRY NEUBECK - ARCHITECT

HOW TO USE THE JIG TABLE

CUT ALL LUMBER TO SIZE AND BUILD FRAMING FOR OPENINGS BEFORE BUILDING WALL SECTIONS ON JIG TABLE.

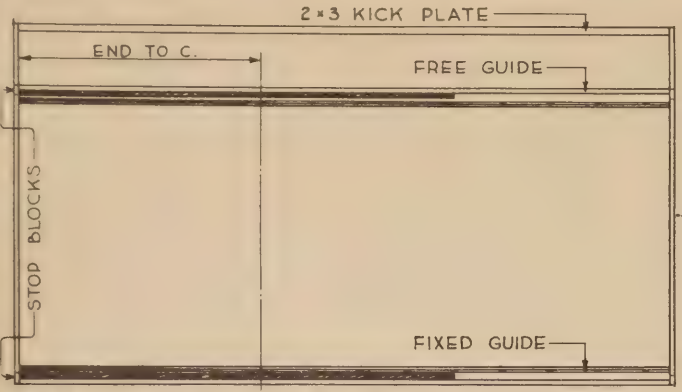


FIG. 1 - LOCATE THE FREE GUIDE ON THE FLOOR OF THE TABLE SO THAT THE DISTANCE BETWEEN THE FREE AND FIXED GUIDES IS APPROXIMATELY THE HEIGHT OF THE WALL SECTION. PLACE THE TOP AND BOTTOM PLATES OF THE SECTION IN THE GUIDES AS SHOWN SO THAT THE LEFT END OF THE SECTION IS AGAINST THE STOP BLOCKS AT THE LEFT ENDS OF THE GUIDES. THESE POINTS ARE ALSO THE ZERO READINGS OF THE STEEL TAPES ON THE GUIDES. LOCATE THE CENTER LINE OF OPENING BY MEANS OF THE STEEL TAPES AND MARK ON BOTH PLATES OF WALL SECTION.

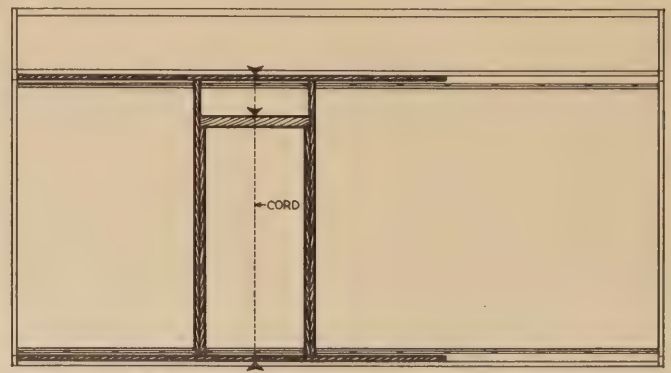


FIG. 2 - PLACE FRAMING FOR OPENING AS SHOWN BY MEANS OF A CORD DRAWN FROM PLATE TO PLATE ON THE CENTER LINE.

FIG. 3 - LOCATE LEFT ENDS OF SLIDING SCALES AT LEFT END OF SECTION AND PLACE STUDS AT MARKINGS ON SCALES FROM LEFT END OF SECTION TO OPENING.

THIS SHEET APPLIES TO INTERIOR WALL SECTIONS ONLY

SEE SHEET Nº C FOR EXTERIOR WALL SECTION CONSTRUCTION

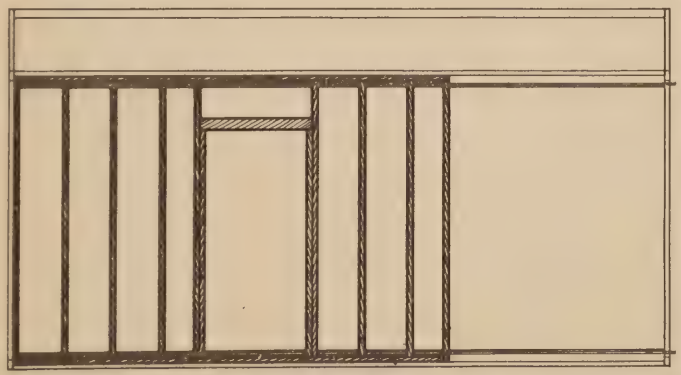


FIG. 4 - MOVE SLIDING SCALES UNTIL A STUD MARKING COINCIDES WITH RIGHT HAND STUD OF OPENING. PLACE REMAINING STUDS AT MARKINGS ON SCALES FROM OPENING TO RIGHT HAND END OF SECTION.

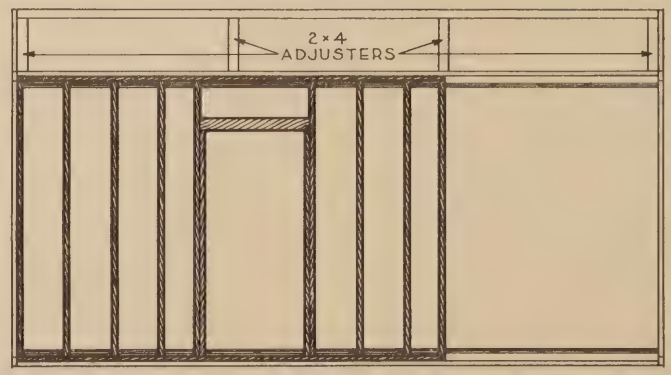


FIG. 5 - PLACE ADJUSTERS, THUS SQUARING SECTION, AND TRUE STUDS AND FRAMING FOR OPENING. NAIL TOP AND BOTTOM PLATES TO STUDS AND FRAMING FOR OPENING.

FIG. 6 - PLACE CRIPPLES ABOVE HEAD OF OPENING AS SHOWN AND NAIL.

AFTER THE FRAMING FOR THE SECTION IS COMPLETE, REMOVE THE ADJUSTERS TO RELEASE THE FREE GUIDE. MOVE THE FREE GUIDE TOWARD 2×3 KICK PLATE SO THAT THE SECTION MAY BE PLACED FLAT ON THE FLOOR OF TABLE. APPLY HOMASOTE WITH SOTE GLUE AND EDGE NAILING. MARK OPENING AND CUT OUT WITH SKILL SAW. APPLY 1×2 PRESSURE STRIPS ON STUDS. TURN SECTION OVER, APPLY HOMASOTE, MARK AND CUT OUT OPENING AND APPLY STRIPS.

HOW TO USE THE JIG TABLE

FRAMING FOR OPENING

Cut all lumber to size and build the framing for openings as shown on the adjoining drawing before building wall sections on the jig table. Locate the free guide on the floor of the table so that the distance between the free and fixed guides is approximately the height of the wall section. Always build sections by starting at the left hand end and working toward the right. Be sure that the sliding scales are in the original position (as shown on Sheet No. A) for the first wall section of an exterior wall group. A wall group consists of those sections which comprise a straight run of wall and the studs in such a group should be on 16" centers throughout the length of the entire wall and starting from the left end. Studs at the ends of wall sections will be the only ones not governed by this centering.

For the first wall section of a group, place top and bottom plates of the section in the guides so that the left end of the section is against the stop blocks at the left ends of the guides. These points are also the zero readings of the steel tapes on the guides. If a window or door opening occurs in the section, locate its center line by means of the steel tapes and mark on both plates of wall section. Place framing for opening by means of a cord drawn from plate to plate on the center line. Place studs at all markings on the sliding scales within the section and a stud at the right hand end of the section, excepting of course the opening. Place adjusters, thus squaring the section, and true studs and framing for opening. Nail all members of the section together. Cripples above the head and below the sill of the opening may be placed and nailed at this time if they have not already been included as a part of the framing for the opening. If a heating duct or radiator occurs in the wall beneath a window, the cripples should be placed to provide for this.

Now note the distance from the right hand end of the section to the left hand edge of the next stud marking to the right on the sliding scales. This dimension is the distance between the stop blocks and the ends of the sliding scales at the left end of the table when the scales are moved into position for the second section of the group. In the same manner this dimension is determined from section to section until the group is complete. Then place the scales in the original position and begin again for the next group. Only exterior wall sections are built in groups. HOMASOTE on the exterior side of a section is applied with nails only whereas HOMASOTE on all interior sides of sections is applied with SOTE glue and edge nailing, plus 1"x 2" pressure strips.

THIS SHEET APPLIES TO EXTERIOR WALL SECTIONS ONLY
See Sheet No. B for interior wall section construction

ROOF FRAMING

The following explanation and tables are designed as an aid to both the architect and the contractor. The lengths and cuts of all rafters depend upon the selected rise in inches per one foot of run and are explained by the drawings on Sheet No. 5. Lengths are listed in the Roof Tables.

COMMON RAFTERS (Figs. 1 and 2)

The distance ED from the top of the continuous plate to the top of the rafter is a variable distance set by the designer and is determined by special conditions such as cornice details, roof pitches, etc. For average conditions with a rafter having no projection, ED may be set to the dimensions noted on the Table of "K" Dimensions (precedes Roof Tables). This makes it possible to determine dimension "K" for any rise and hence the overall length of a common rafter.

As the run A (Fig. 2) and the rise are known, the length C is found from the table of Common and Jack Rafters for the selected rise.

Example 1

Rise 6" and run A equals 10'-5 1/2"

Run		Length (from table)
10'-0"	-	11'-2 3/16"
5"	-	5 5/8"
0 1/2"	-	0 9/16"
10'-5 1/2"	-	11'-8 3/8" length C

Length C' is found similarly from run A.

The total rise B is found from the Table of Total Rise.

Example 2

Rise 6" and run A equals 10'-5 1/2"

Run		Total Rise (from table)
10'-0"	-	5'-0"
5"	-	2 1/2"
0 1/2"	-	0 1/4"
10'-5 1/2"	-	5'-2 3/4" total rise B

Plumb cuts at ridge and at ED are marked off with the steel square as shown. After distance ED is measured, level cut DF is marked off perpendicular to plumb cut ED.

HIP AND VALLEY RAFTERS (Figs. 1, 3 and 4)

Distances ED (Fig. 3) and ED (Fig. 4) equal distance ED of common rafter.

As the run A and the rise are known (Fig. 1), the length GE (Figs. 3 and 4) is found from the table of Hip and Valley Rafters for the selected rise.

Example 3

Rise 6" and run A equals 10'-5 1/2"

Run		Length (from table)
10'-0"	-	15'-0"
5"	-	7 1/2"
0 1/2"	-	0 3/4"
10'-5 1/2"	-	15'-8 1/4" length GE

The short hip rafter from ridge to ridge (Fig. 1) is similar to Cripple Jack "b", but the length is taken from the table of Hip and Valley Rafters.

HIP JACK RAFTERS (Figs. 1 and 5)

Distance ED (Fig. 5) equals ED of common rafter. As the run L (Fig. 1) and the rise are known, the length (Fig. 5) is found from the tables by the same method as described for common rafters and as shown in Example 1.

VALLEY JACK RAFTERS (Figs. 1 and 6)

Distance N (Fig. 1) equals the spacing minus distance P. Run M equals run Q minus N. Then from the tables the length is found from run M by the same method as described for common rafters and as shown in Example 1.

Each successive valley jack rafter (or hip jack rafter) is increased or decreased, as the case may be, by the dimension listed in the Table of Spacing for the selected rise.

Example 4

If the rise is 6" and the spacing of rafters is 16" on centers, the difference in length between successive hip jack or valley jack rafters is 17 7/8".

CRIPPLE JACK RAFTERS (Figs. 1, 7 and 8)

Length of Cripple Jack Rafter "a" is found from run S (Fig. 1) by the same method as described for common rafters and as shown in Example 1.

Length of Cripple Jack Rafter "b" is found from run 2T (Fig. 1) by the same method as described for common rafters and as shown in Example 1. Run 2T equals twice the distance T. Each successive cripple jack rafter "b" is increased or decreased in length, as the case may be, by twice the dimension listed in the Table of Spacing for the selected rise.

Cuts at ends of all rafters are made by using the steel square. The run of hip and valley rafters is 17" for the selected rise; the run of all other rafters is the usual one foot for the selected rise.

TABLE OF "K" DIMENSIONS

RISE	ED = 3" FOR 2×4 RAFTERS	ED = 5" FOR 2×6 RAFTERS	ED = 7" FOR 2×8 RAFTERS	RISE	ED = 3" FOR 2×4 RAFTERS	ED = 5" FOR 2×6 RAFTERS	ED = 7" FOR 2×8 RAFTERS
2	0 1/2	0 13/16	1 1/8	10 1/2	2	3 5/16	4 5/8
2 1/2	0 5/8	1	1 7/16	11	2	3 3/8	4 3/4
3	0 3/4	1 3/16	1 11/16	11 1/2	2 1/16	3 7/16	4 7/8
3 1/2	0 13/16	1 3/8	1 15/16	12	2 1/8	3 9/16	4 15/16
4	0 15/16	1 9/16	2 3/16	12 1/2	2 3/16	3 5/8	5 1/16
4 1/2	1 1/16	1 3/4	2 7/16	13	2 3/16	3 11/16	5 1/8
5	1 1/8	1 15/16	2 11/16	13 1/2	2 1/4	3 3/4	5 1/4
5 1/2	1 1/4	2 1/16	2 15/16	14	2 1/4	3 13/16	5 5/16
6	1 5/16	2 1/4	3 1/8	14 1/2	2 5/16	3 7/8	5 3/8
6 1/2	1 7/16	2 3/8	3 5/16	15	2 5/16	3 7/8	5 7/16
7	1 1/2	2 1/2	3 1/2	15 1/2	2 3/8	3 15/16	5 9/16
7 1/2	1 9/16	2 5/8	3 11/16	16	2 3/8	4	5 5/8
8	1 11/16	2 3/4	3 7/8	16 1/2	2 7/16	4 1/16	5 11/16
8 1/2	1 3/4	2 7/8	4 1/16	17	2 7/16	4 1/16	5 3/4
9	1 13/16	3	4 3/16	17 1/2	2 1/2	4 1/8	5 3/4
9 1/2	1 7/8	3 1/8	4 5/16	18	2 1/2	4 3/16	5 13/16
10	1 15/16	3 3/16	4 1/2				

ROOF TABLES

TABLE OF SPACING
12" CENTERS 12 3/16"
16" CENTERS 16 1/4"
18" CENTERS 18 1/4"
20" CENTERS 20 1/4"
24" CENTERS 24 5/16"

Rise 2"
1/12 Pitch 9°27'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		1/2		3/4		
3/4		3/4		1 1/16		
1	1-0 3/16	1	1-5 1/16	1 7/16	2	3/16
2	2-0 5/16	2	2-10 3/16	2 7/8	4	5/16
3	3-0 1/2	3 1/16	4-3 1/4	4 1/4	6	1/2
4	4-0 11/16	4 1/16	5-8 3/8	5 11/16	8	11/16
5	5-0 13/16	5 1/16	7-1 7/16	7 1/8	10	13/16
6	6-1	6 1/16	8-6 1/2	8 9/16	1-0	1
7	7-1 3/16	7 1/8	9-11 5/8	10	1-2	1 3/16
8	8-1 5/16	8 1/8	11-4 11/16	11 3/8	1-4	1 5/16
9	9-1 1/2	9 1/8	12-9 13/16	1-0 13/16	1-6	1 1/2
10	10-1 11/16	10 1/8	14-2 7/8	1-2 1/4	1-8	1 11/16
11	11-1 13/16	11 3/16	15-8	1-3 11/16	1-10	1 13/16
12	12-2	1-0 3/16	17-1 1/16	1-5 1/16	2-0	2
13	13-2 3/16		18-6 1/8		2-2	
14	14-2 5/16		19-11 1/4		2-4	
15	15-2 1/2		21-4 5/16		2-6	

TABLE OF SPACING
12" CENTERS 12 1/4"
16" CENTERS 16 3/8"
18" CENTERS 18 3/8"
20" CENTERS 20 7/16"
24" CENTERS 24 1/2"

Rise 2 1/2"
5/48 Pitch 11°46'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		1/2		3/4		
3/4		3/4		1 1/16		
1	1-0 1/4	1	1-5 3/16	1 7/16	2 1/2	3/16
2	2-0 1/2	2 1/16	2-10 5/16	2 7/8	5	7/16
3	3-0 3/4	3 1/16	4-3 7/16	4 5/16	7 1/2	5/8
4	4-1 1/16	4 1/16	5-8 5/8	5 3/4	10	13/16
5	5-1 5/16	5 1/8	7-1 3/4	7 1/8	1-0 1/2	1 1/16
6	6-1 9/16	6 1/8	8-6 15/16	8 9/16	1-3	1 1/4
7	7-1 13/16	7 3/16	10-0 1/16	10	1-5 1/2	1 7/16
8	8-2 1/16	8 3/16	11-5 1/4	11 7/16	1-8	1 11/16
9	9-2 5/16	9 3/16	12-10 3/8	1-0 7/8	1-10 1/2	1 7/8
10	10-2 9/16	10 1/4	14-3 9/16	1-2 5/16	2-1	2 1/16
11	11-2 13/16	11 1/4	15-8 11/16	1-3 3/4	2-3 1/2	2 5/16
12	12-3 1/8	1-0 1/4	17-1 7/8	1-5 3/16	2-6	2 1/2
13	13-3 3/8		18-7		2-8 1/2	
14	14-3 5/8		20-0 3/16		2-11	
15	15-3 7/8		21-5 5/16		3-1 1/2	

TABLE OF SPACING
12" CENTERS 12 3/8"
16" CENTERS 16 1/2"
18" CENTERS 18 9/16"
20" CENTERS 20 5/8"
24" CENTERS 24 3/4"

Rise 3"
1/8 Pitch 14°2'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		1/2		3/4		
3/4		3/4		1 1/16		
1	1-0 3/8	1 1/16	1-5 1/4	1 7/16	3	1/4
2	2-0 3/4	2 1/16	2-10 7/16	2 7/8	6	1/2
3	3-1 1/8	3 1/8	4-3 11/16	4 5/16	9	3/4
4	4-1 1/2	4 1/8	5-8 15/16	5 3/4	1-0	1
5	5-1 7/8	5 3/16	7-2 3/16	7 3/16	1-3	1 1/4
6	6-2 1/4	6 3/16	8-7 7/16	8 5/8	1-6	1 1/2
7	7-2 9/16	7 1/4	10-0 5/8	10 1/16	1-9	1 3/4
8	8-2 15/16	8 1/4	11-5 7/8	11 1/2	2-0	2
9	9-3 5/16	9 1/4	12-11 1/8	1-0 15/16	2-3	2 1/4
10	10-3 11/16	10 5/16	14-4 5/16	1-2 3/8	2-6	2 1/2
11	11-4 1/16	11 5/16	15-9 9/16	1-3 13/16	2-9	2 3/4
12	12-4 7/16	1-0 3/8	17-2 13/16	1-5 1/4	3-0	3
13	13-4 13/16		18-8 1/16		3-3	
14	14-5 3/16		20-1 1/4		3-6	
15	15-5 9/16		21-6 1/2		3-9	

ROOF TABLES

TABLE OF SPACING
12" CENTERS 12 1/2"
16" CENTERS 16 11/16"
18" CENTERS 18 3/4"
20" CENTERS 20 13/16"
24" CENTERS 25"

Rise 3 1/2"
7/48 Pitch 16°16'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		1/2		3/4		
3/4		13/16		1 1/16		
1	1-0 1/2	1 1/16	1-5 5/16	1 7/16	3 1/2	5/16
2	2-1	2 1/16	2-10 11/16	2 7/8	7	9/16
3	3-1 1/2	3 1/8	4-4	4 5/16	10 1/2	7/8
4	4-2	4 3/16	5-9 5/16	5 3/4	1-2	1 3/16
5	5-2 1/2	5 3/16	7-2 5/8	7 1/4	1-5 1/2	1 7/16
6	6-3	6 1/4	8-8	8 11/16	1-9	1 3/4
7	7-3 1/2	7 5/16	10-1 5/16	10 1/8	2-0 1/2	2 1/16
8	8-4	8 5/16	11-6 5/8	11 9/16	2-4	2 5/16
9	9-4 1/2	9 3/8	12-11 15/16	1-1	2-7 1/2	2 5/8
10	10-5	10 7/16	14-5 1/4	1-2 7/16	2-11	2 15/16
11	11-5 1/2	11 7/16	15-10 5/8	1-3 7/8	3-2 1/2	3 3/16
12	12-6	1-0 1/2	17-3 15/16	1-5 5/16	3-6	3 1/2
13	13-6 1/2		18-9 1/4		3-9 1/2	
14	14-7		20-2 9/16		4-1	
15	15-7 1/2		21-7 15/16		4-4 1/2	

TABLE OF SPACING
12" CENTERS 12 5/8"
16" CENTERS 16 7/8"
18" CENTERS 18 15/16"
20" CENTERS 21 1/16"
24" CENTERS 25 5/16"

Rise 4"
1/6 Pitch 18°26'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		1/2		3/4		
3/4		13/16		1 1/16		
1	1-0 5/8	1 1/16	1-5 7/16	1 7/16	4	5/16
2	2-1 5/16	2 1/8	2-10 3/4	2 15/16	8	11/16
3	3-1 15/16	3 3/16	4-4 5/16	4 3/8	1-0	1
4	4-2 5/8	4 1/4	5-9 3/4	5 13/16	1-4	1 5/16
5	5-3 1/4	5 1/4	7-3 3/16	7 1/4	1-8	1 11/16
6	6-3 7/8	6 5/16	8-8 5/8	8 3/4	2-0	2
7	7-4 9/16	7 3/8	10-2 1/16	10 3/16	2-4	2 5/16
8	8-5 3/16	8 7/16	11-7 1/2	11 5/8	2-8	2 11/16
9	9-5 7/8	9 1/2	13-0 15/16	1-1 1/16	3-0	3
10	10-6 1/2	10 9/16	14-6 3/8	1-2 1/2	3-4	3 5/16
11	11-7 1/8	11 5/8	15-11 13/16	1-4	3-8	3 11/16
12	12-7 13/16	1-0 5/8	17-5 1/4	1-5 7/16	4-0	4
13	13-8 7/16		18-10 11/16		4-4	
14	14-9 1/16		20-4 1/8		4-8	
15	15-9 3/4		21-9 9/16		5-0	

TABLE OF SPACING
12" CENTERS 12 13/16"
16" CENTERS 17 1/16"
18" CENTERS 19 1/4"
20" CENTERS 21 3/8"
24" CENTERS 25 5/8"

Rise 4 1/2"
9/48 Pitch 20°33'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		9/16		3/4		
3/4		13/16		1 1/8		
1	1-0 13/16	1 1/16	1-5 9/16	1 7/16	4 1/2	3/8
2	2-1 5/8	2 1/8	2-11 1/8	2 15/16	9	3/4
3	3-2 7/16	3 3/16	4-4 11/16	4 3/8	1-1 1/2	1 1/8
4	4-3 1/4	4 1/4	5-10 1/4	5 7/8	1-6	1 1/2
5	5-4 1/16	5 3/8	7-3 13/16	7 5/16	1-10 1/2	1 7/8
6	6-4 7/8	6 7/16	8-9 3/8	8 3/4	2-3	2 1/4
7	7-5 3/4	7 1/2	10-2 7/8	10 1/4	2-7 1/2	2 5/8
8	8-6 1/2	8 9/16	11-8 7/16	11 11/16	3-0	3
9	9-7 3/8	9 5/8	13-2	1-1 3/16	3-4 1/2	3 3/8
10	10-8 3/16	10 11/16	14-7 9/16	1-2 5/8	3-9	3 3/4
11	11-9	11 3/4	16-1 1/8	1-4 1/8	4-1 1/2	4 1/8
12	12-9 13/16	1-0 13/16	17-6 11/16	1-5 9/16	4-6	4 1/2
13	13-10 5/8		19-0 1/4		4-10 1/2	
14	14-11 7/16		20-5 13/16		5-3	
15	16-0 1/4		21-11 3/8		5-7 1/2	

TABLE OF SPACING
12" CENTERS 13"
16" CENTERS 17 5/16"
18" CENTERS 19 1/2"
20" CENTERS 21 11/16"
24" CENTERS 26"

Rise 5"
5/24 Pitch 22°37'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		9/16		3/4		
3/4		13/16		1 1/8		
1	1-1	1 1/16	1-5 11/16	1 1/2	5	7/16
2	2-2	2 3/16	2-11 3/8	2 15/16	10	13/16
3	3-3	3 1/4	4-5 1/16	4 7/16	1-3	1 1/4
4	4-4	4 5/16	5-10 3/4	5 7/8	1-8	1 11/16
5	5-5	5 7/16	7-4 7/16	7 3/8	2-1	2 1/16
6	6-6	6 1/2	8-10 3/16	8 7/8	2-6	2 1/2
7	7-7	7 9/16	10-3 7/8	10 5/16	2-11	2 15/16
8	8-8	8 11/16	11-9 9/16	11 13/16	3-4	3 5/16
9	9-9	9 3/4	13-3 1/4	1-1 1/4	3-9	3 3/4
10	10-10	10 13/16	14-8 15/16	1-2 3/4	4-2	4 3/16
11	11-11	11 15/16	16-2 5/8	1-4 1/4	4-7	4 9/16
12	13-0	1-1	17-8 15/16	1-5 11/16	5-0	5
13	14-1		19-2		5-5	
14	15-2		20-7 11/16		5-10	
15	16-3		22-1 3/8		6-3	

TABLE OF SPACING
12" CENTERS 13 3/16"
16" CENTERS 17 5/8"
18" CENTERS 19 13/16"
20" CENTERS 22"
24" CENTERS 26 3/8"

Rise 5 1/2"
11/48 Pitch 24°37'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		9/16		3/4		
3/4		13/16		1 1/8		
1	1-1 3/16	1 1/8	1-5 13/16	1 1/2	5 1/2	7/16
2	2-2 7/16	2 3/16	2-11 11/16	3	11	15/16
3	3-3 5/8	3 5/16	4-5 1/2	4 7/16	1-4 1/2	1 3/8
4	4-4 13/16	4 7/16	5-11 3/8	5 15/16	1-10	1 13/16
5	5-6	5 1/2	7-5 3/16	7 7/16	2-3 1/2	2 5/16
6	6-7 3/16	6 5/8	8-11 1/16	8 15/16	2-9	2 3/4
7	7-8 7/16	7 11/16	10-4 7/8	10 7/16	3-2 1/2	3 3/16
8	8-9 5/8	8 13/16	11-10 3/4	11 7/8	3-8	3 11/16
9	9-10 13/16	9 15/16	13-4 9/16	1-1 3/8	4-1 1/2	4 1/8
10	11-0	11	14-10 3/8	1-2 7/8	4-7	4 9/16
11	12-1 3/16	1-0 1/8	16-4 1/4	1-4 3/8	5-0 1/2	5 1/16
12	13-2 7/16	1-1 3/16	17-10 1/16	1-5 13/16	5-6	5 1/2
13	14-3 5/8		19-3 15/16		5-11 1/2	
14	15-4 13/16		20-9 3/4		6-5	
15	16-6		22-3 5/8		6-10 1/2	

TABLE OF SPACING
12" CENTERS 13 7/16"
16" CENTERS 17 7/8"
18" CENTERS 20 1/8"
20" CENTERS 22 3/8"
24" CENTERS 26 13/16"

Rise 6"
1/4 Pitch 26°34'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/4		3/8		
1/2		9/16		3/4		
3/4		13/16		1 1/8		
1	1-1 7/16	1 1/8	1-6	1 1/2	6	1/2
2	2-2 13/16	2 1/4	3-0	3	1-0	1
3	3-4 1/4	3 3/8	4-6	4 1/2	1-6	1 1/2
4	4-5 11/16	4 1/2	6-0	6	2-0	2
5	5-7 1/16	5 5/8	7-6	7 1/2	2-6	2 1/2
6	6-8 1/2	6 11/16	9-0	9	3-0	3
7	7-9 15/16	7 13/16	10-6	10 1/2	3-6	3 1/2
8	8-11 5/16	8 15/16	12-0	1-0	4-0	4
9	10-0 3/4	10 1/16	13-6	1-1 1/2	4-6	4 1/2
10	11-2 3/16	11 3/16	15-0	1-3	5-0	5
11	12-3 9/16	1-0 5/16	16-6	1-4 1/2	5-6	5 1/2
12	13-5	1-1 7/16	18-0	1-6	6-0	6
13	14-6 7/16		19-6		6-6	
14	15-7 13/16		21-0		7-0	
15	16-9 1/4		22-6		7-6	

ROOF TABLES

TABLE OF SPACING — Rise 6½" — 13/48 Pitch 28°27'

12" CENTERS 13 5/8"
16" CENTERS 18 3/16"
18" CENTERS 20 7/16"
20" CENTERS 22 3/4"
24" CENTERS 27 5/16"

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		3/8		
1/2		9/16		3/4		
3/4		7/8		1 1/8		
1	1-1 5/8	1 1/8	1-6 3/16	1 1/2	6 1/2	9/16
2	2-3 5/16	2 1/4	3-0 3/8	3	1-1	1 1/16
3	3-4 15/16	3 7/16	4-6 1/2	4 9/16	1-7 1/2	1 5/8
4	4-6 9/16	4 9/16	6-0 11/16	6 1/16	2-2	2 3/16
5	5-8 1/4	5 11/16	7-6 7/8	7 9/16	2-8 1/2	2 11/16
6	6-9 7/8	6 13/16	9-1 1/16	9 1/16	3-3	3 1/4
7	7-11 9/16	8	10-7 3/16	10 5/8	3-9 1/2	3 13/16
8	9-1 3/16	9 1/8	12-1 3/8	1-0 1/8	4-4	4 5/16
9	10-2 13/16	10 1/4	13-7 9/16	1-1 5/8	4-10 1/2	4 7/8
10	11-4 1/2	11 3/8	15-1 3/4	1-3 1/8	5-5	5 7/16
11	12-6 1/8	1-0 1/2	16-7 15/16	1-4 11/16	5-11 1/2	5 15/16
12	13-7 3/4	1-1 5/8	18-2 1/16	1-6 3/16	6-6	6 1/2
13	14-9 7/16		19-8 1/4		7-0 1/2	
14	15-11 1/16		21-2 7/16		7-7	
15	17-0 3/4		22-8 5/8		8-1 1/2	

TABLE OF SPACING — Rise 7" — 7/24 Pitch 30°16'

12" CENTERS 13 7/8"
16" CENTERS 18 1/2"
18" CENTERS 20 13/16"
20" CENTERS 23 3/16"
24" CENTERS 27 13/16"

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		3/8		
1/2		9/16		3/4		
3/4		7/8		1 1/8		
1	1-1 7/8	1 3/16	1-6 3/8	1 1/2	7	9/16
2	2-3 13/16	2 5/16	3-0 3/4	3 1/16	1-2	1 3/16
3	3-5 11/16	3 1/2	4-7 1/16	4 9/16	1-9	1 3/4
4	4-7 9/16	4 5/8	6-1 7/16	6 1/8	2-4	2 5/16
5	5-9 7/16	5 13/16	7-7 13/16	7 5/8	2-11	2 15/16
6	6-11 3/8	6 15/16	9-2 1/8	9 3/16	3-6	3 1/2
7	8-1 1/4	8 1/8	10-8 1/2	10 11/16	4-1	4 1/16
8	9-3 1/8	9 1/4	12-2 7/8	1-0 1/4	4-8	4 11/16
9	10-5 1/16	10 7/16	13-9 1/4	1-1 3/4	5-3	5 1/4
10	11-6 15/16	11 9/16	15-3 9/16	1-3 5/16	5-10	5 13/16
11	12-8 13/16	1-0 3/4	16-9 15/16	1-4 13/16	6-5	6 7/16
12	13-10 11/16	1-1 7/8	18-4 5/16	1-6 3/8	7-0	7
13	15-0 5/8		19-10 5/8		7-7	
14	16-2 1/2		21-5		8-2	
15	17-4 3/8		22-11 3/8		8-9	

TABLE OF SPACING — Rise 7½" — 15/48 Pitch 32°

12" CENTERS 14 3/16"
16" CENTERS 18 5/16"
18" CENTERS 21 1/4"
20" CENTERS 23 5/16"
24" CENTERS 28 5/16"

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		3/8		
1/2		9/16		3/4		
3/4		7/8		1 3/16		
1	1-2 3/16	1 3/16	1-6 9/16	1 9/16	7 1/2	5/8
2	2-4 5/16	2 3/8	3-1 1/8	3 1/8	1-3	1 1/4
3	3-6 7/16	3 9/16	4-7 11/16	4 5/8	1-10 1/2	1 7/8
4	4-8 5/8	4 3/4	6-2 1/4	6 3/16	2-6	2 1/2
5	5-10 3/4	5 7/8	7-8 3/4	7 3/4	3-1 1/2	3 1/8
6	7-0 15/16	7 1/16	9-3 5/16	9 1/4	3-9	3 3/4
7	8-3 1/16	8 1/4	10-9 7/8	10 13/16	4-4 1/2	4 3/8
8	9-5 3/16	9 7/16	12-4 7/16	1-0 3/8	5-0	5
9	10-7 3/8	10 5/8	13-11	1-1 15/16	5-7 1/2	5 5/8
10	11-9 1/2	11 13/16	15-5 9/16	1-3 7/16	6-3	6 1/4
11	12-11 11/16	1-1	17-0 1/8	1-5	6-10 1/2	6 7/8
12	14-1 13/16	1-2 3/16	18-6 5/8	1-6 9/16	7-6	7 1/2
13	15-4		20-1 3/16		8-1 1/2	
14	16-6 1/8		21-7 3/4		8-9	
15	17-8 1/4		23-2 5/16		9-4 1/4	

TABLE OF SPACING — Rise 8" — 1/3 Pitch 33°41'

12" CENTERS 14 7/16"
16" CENTERS 19 1/4"
18" CENTERS 21 11/16"
20" CENTERS 24 1/16"
24" CENTERS 28 7/8"

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		3/8		
1/2		5/8		13/16		
3/4		15/16		1 3/16		
1	1-2 7/16	1 3/16	1-6 3/4	1 9/16	8	11/16
2	2-4 7/8	2 7/16	3-1 1/2	3 1/8	1-4	1 5/16
3	3-7 1/4	3 5/8	4-8 5/16	4 11/16	2-0	2
4	4-9 11/16	4 13/16	6-3 1/16	6 1/4	2-8	2 11/16
5	6-0 1/8	6	7-9 13/16	7 13/16	3-4	3 5/16
6	7-2 9/16	7 1/4	9-4 9/16	9 3/8	4-0	4
7	8-4 15/16	8 7/16	10-11 5/16	10 15/16	4-8	4 11/16
8	9-7 3/8	9 5/8	12-6 1/8	1-0 1/2	5-4	5 5/16
9	10-9 13/16	10 13/16	14-0 7/8	1-2 1/16	6-0	6
10	12-0 1/4	1-0	15-7 5/8	1-3 5/8	6-8	6 11/16
11	13-2 5/8	1-1 1/4	17-2 3/8	1-5 3/16	7-4	7 5/16
12	14-5 1/16	1-2 7/16	18-9 1/8	1-6 3/4	8-0	8
13	15-7 1/2		20-3 15/16		8-8	
14	16-9 15/16		21-10 11/16		9-4	
15	18-0 3/8		23-5 7/16		10-0	

TABLE OF SPACING — Rise 8½" — 17/48 Pitch 35°19'

12" CENTERS 14 11/16"
16" CENTERS 19 5/8"
18" CENTERS 22 1/16"
20" CENTERS 24 1/2"
24" CENTERS 29 7/16"

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		3/8		
1/2		5/8		13/16		
3/4		15/16		1 3/16		
1	1-2 11/16	1 1/4	1-7	1 9/16	8 1/2	11/16
2	2-5 7/16	2 7/16	3-2	3 3/16	1-5	1 7/16
3	3-8 1/8	3 11/16	4-8 15/16	4 3/4	2-1 1/2	2 1/8
4	4-10 13/16	4 15/16	6-3 15/16	6 5/16	2-10	2 13/16
5	6-1 1/2	6 1/8	7-10 15/16	7 15/16	3-6 1/2	3 9/16
6	7-4 1/4	7 3/8	9-5 7/8	9 1/2	4-3	4 1/4
7	8-6 15/16	8 9/16	11-0 7/8	11 1/16	4-11 1/2	4 15/16
8	9-9 5/8	9 13/16	12-7 7/8	1-0 11/16	5-8	5 11/16
9	11-0 3/8	11	14-2 13/16	1-2 1/4	6-4 1/2	6 3/8
10	12-3 1/16	1-0 1/4	15-9 13/16	1-3 13/16	7-1	7 1/16
11	13-5 3/4	1-1 1/2	17-4 13/16	1-5 3/8	7-9 1/2	7 13/16
12	14-8 1/2	1-2 11/16	18-11 3/4	1-7	8-6	8 1/2
13	15-11 3/16		20-6 3/4		9-2 1/2	
14	17-1 7/8		22-1 3/4		9-11	
15	18-4 3/16		23-8 11/16		10-7 1/2	

TABLE OF SPACING — Rise 9" — 9/24 Pitch 36°52'

12" CENTERS 15"
16" CENTERS 20"
18" CENTERS 22 1/2"
20" CENTERS 25"
24" CENTERS 30"

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		7/16		
1/2		5/8		13/16		
3/4		15/16		1 3/16		
1	1-3	1 1/4	1-7 3/16	1 5/8	9	3/4
2	2-6	2 1/2	3-2 7/16	3 3/16	1-6	1 1/2
3	3-9	3 3/4	4-9 5/8	4 13/16	2-3	2 1/4
4	5-0	5	6-4 13/16	6 7/16	3-0	3
5	6-3	6 1/4	8-0 1/16	8	3-9	3 3/4
6	7-6	7 1/2	9-7 1/4	9 5/8	4-6	4 1/2
7	8-9	8 3/4	11-2 7/16	11 3/16	5-3	5 1/4
8	10-0	10	12-9 11/16	1-0 13/16	6-0	6
9	11-3	11 1/4	14-4 7/8	1-2 7/16	6-9	6 3/4
10	12-6	1-0 1/2	16-0 1/8	1-4	7-6	7 1/2
11	13-9	1-1 3/4	17-7 5/16	1-5 5/8	8-3	8 1/4
12	15-0	1-3	19-2 1/2	1-7 3/16	9-0	9
13	16-3		20-9 3/4		9-9	
14	17-6		22-4 15/16		10-6	
15	18-9		24-0 1/8		11-3	

W. HENRY NEUBECK - ARCHITECT

ROOF TABLES

TABLE OF SPACING
12" CENTERS 15 5/16"
16" CENTERS 20 3/8"
18" CENTERS 23"
20" CENTERS 25 1/2"
24" CENTERS 30 5/8"

Rise 9½"
19/48 Pitch 38°22'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		7/16		
1/2		5/8		13/16		
3/4		15/16		1 1/4		
1	1-3 5/16	1 1/4	1-7 7/16	1 5/8	9 1/2	13/16
2	2-6 5/8	2 9/16	3-2 7/8	3 1/4	1-7	1 9/16
3	3-9 15/16	3 13/16	4-10 3/8	4 7/8	2-4 1/2	2 3/8
4	5-1 1/4	5 1/8	6-5 13/16	6 1/2	3-2	3 3/16
5	6-4 1/2	6 3/8	8-1 1/4	8 1/8	3-11 1/2	3 15/16
6	7-7 13/16	7 11/16	9-8 11/16	9 3/4	4-9	4 3/4
7	8-11 1/8	8 15/16	11-4 1/8	11 3/8	5-6 1/2	5 9/16
8	10-2 7/16	10 3/16	12-11 5/8	1-1	6-4	6 5/16
9	11-5 3/4	11 1/2	14-7 1/16	1-2 9/16	7-1 1/2	7 1/8
10	12-9 1/16	1-0 3/4	16-2 1/2	1-4 3/16	7-11	7 15/16
11	14-0 3/8	1-2	17-9 15/16	1-5 13/16	8-8 1/2	8 11/16
12	15-3 11/16	1-3 5/16	19-5 3/8	1-7 7/16	9-6	9 1/2
13	16-7		21-0 13/16		10-3 1/2	
14	17-10 1/4		22-8 5/16		11-1	
15	19-1 9/16		24-3 3/4		11-10 1/2	

TABLE OF SPACING
12" CENTERS 15 5/8"
16" CENTERS 20 13/16"
18" CENTERS 23 7/16"
20" CENTERS 26 1/16"
24" CENTERS 31 1/4"

Rise 10"
5/12 Pitch 39°48'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		7/16		
1/2		11/16		13/16		
3/4		1		1 1/4		
1	1-3 5/8	1 5/16	1-7 11/16	1 5/8	10	13/16
2	2-7 1/4	2 5/8	3-3 3/8	3 5/16	1-8	1 11/16
3	3-10 7/8	3 15/16	4-11 1/8	4 15/16	2-6	2 1/2
4	5-2 1/2	5 3/16	6-6 13/16	6 9/16	3-4	3 5/16
5	6-6 1/8	6 1/2	8-2 1/2	8 3/16	4-2	4 3/16
6	7-9 3/4	7 13/16	9-10 3/16	9 7/8	5-0	5
7	9-1 3/8	9 1/8	11-5 7/8	11 1/2	5-10	5 13/16
8	10-5	10 7/16	13-1 9/16	1-1 1/8	6-8	6 11/16
9	11-8 9/16	11 3/4	14-9 5/16	1-2 3/4	7-6	7 1/2
10	13-0 3/16	1-1	16-5	1-4 7/16	8-4	8 5/16
11	14-3 13/16	1-2 5/16	18-0 11/16	1-6 1/16	9-2	9 3/16
12	15-7 1/16	1-3 5/8	19-8 3/8	1-7 11/16	10-0	10
13	16-11 1/16		21-4 7/16		10-10	
14	18-2 3/4		22-11 3/4		11-8	
15	19-6 3/8		24-7 1/2		12-6	

TABLE OF SPACING
12" CENTERS 15 15/16"
16" CENTERS 21 1/4"
18" CENTERS 23 5/16"
20" CENTERS 26 9/16"
24" CENTERS 31 7/8"

Rise 10½"
2 1/48 Pitch 41°11'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		7/16		
1/2		11/16		13/16		
3/4		1		1 1/4		
1	1-3 15/16	1 5/16	1-7 15/16	1 11/16	10 1/2	7/8
2	2-7 7/8	2 11/16	3-3 15/16	3 5/16	1-9	1 3/4
3	3-11 13/16	4	4-11 7/8	5	2-7 1/2	2 5/8
4	5-3 13/16	5 5/16	6-7 13/16	6 11/16	3-6	3 1/2
5	6-7 3/4	6 5/8	8-3 13/16	8 5/16	4-4 1/2	4 3/8
6	7-11 11/16	8	9-11 3/4	10	5-3	5 1/4
7	9-3 5/8	9 5/16	11-7 11/16	11 5/8	6-1 1/2	6 1/8
8	10-7 9/16	10 5/8	13-3 5/8	1-1 5/16	7-0	7
9	11-11 1/2	11 15/16	14-11 5/8	1-3	7-10 1/2	7 7/8
10	13-3 7/16	1-1 5/16	16-7 9/16	1-4 5/8	8-9	8 3/4
11	14-7 3/8	1-2 5/8	18-3 1/2	1-6 5/16	9-7 1/2	9 5/8
12	15-11 3/8	1-3 15/16	19-11 1/2	1-7 15/16	10-6	10 1/2
13	17-3 5/16		21-7 7/16		11-4 1/2	
14	18-7 1/4		23-3 3/8		12-3	
15	19-11 3/16		24-11 3/8		13-1 1/2	

TABLE OF SPACING
12" CENTERS 16 1/4"
16" CENTERS 21 1/16"
18" CENTERS 24 3/8"
20" CENTERS 27 1/8"
24" CENTERS 32 5/16"

Rise 11"
1 1/24 Pitch 42°31'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		5/16		7/16		
1/2		11/16		7/8		
3/4		1		1 1/4		
1	1-4 1/4	1 3/8	1-8 1/4	1 11/16	11	15/16
2	2-8 9/16	2 3/4	3-4 7/16	3 3/8	1-10	1 13/16
3	4-0 13/16	4 1/16	5-0 11/16	5 1/16	2-9	2 3/4
4	5-5 1/8	5 7/16	6-8 7/8	6 3/4	3-8	3 11/16
5	6-9 3/8	6 13/16	8-5 1/8	8 7/16	4-7	4 9/16
6	8-1 11/16	8 1/8	10-1 3/8	10 1/8	5-6	5 1/2
7	9-5 15/16	9 1/2	11-9 9/16	11 13/16	6-5	6 7/16
8	10-10 1/4	10 7/8	13-5 13/16	1-1 1/2	7-4	7 5/16
9	12-2 1/2	1-0 3/16	15-2	1-3 3/16	8-3	8 1/4
10	13-6 13/16	1-1 9/16	16-10 1/4	1-4 7/8	9-2	9 3/16
11	14-11 1/16	1-2 15/16	18-6 7/16	1-6 9/16	10-1	10 1/16
12	16-3 3/8	1-4 1/4	20-2 11/16	1-8 1/4	11-0	11
13	17-7 5/8		21-10 15/16		11-11	
14	18-11 15/16		23-7 1/8		12-10	
15	20-4 3/16		25-3 3/8		13-9	

TABLE OF SPACING
12" CENTERS 16 5/8"
16" CENTERS 22 3/16"
18" CENTERS 24 15/16"
20" CENTERS 27 11/16"
24" CENTERS 33 1/4"

Rise 11½"
23/48 Pitch 43°47'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		11/16		7/8		
3/4		1 1/16		1 5/16		
1	1-4 5/8	1 3/8	1-8 1/2	1 11/16	11 1/2	15/16
2	2-9 1/4	2 3/4	3-5	3 7/16	1-11	1 15/16
3	4-1 7/8	4 3/16	5-1 1/2	5 1/8	2-10 1/2	2 7/8
4	5-6 1/2	5 9/16	6-10	6 13/16	3-10	3 13/16
5	6-11 1/8	6 15/16	8-6 1/2	8 9/16	4-9 1/2	4 13/16
6	8-3 3/4	8 5/16	10-3	10 1/4	5-9	5 3/4
7	9-8 3/8	9 11/16	11-11 1/2	11 15/16	6-8 1/2	6 11/16
8	11-1	11 1/16	13-8	1-1 11/16	7-8	7 11/16
9	12-5 9/16	1-0 1/2	15-4 1/2	1-3 3/8	8-7 1/2	8 5/8
10	13-10 3/16	1-1 7/8	17-1	1-5 1/16	9-7	9 9/16
11	15-2 13/16	1-3 1/4	18-9 1/2	1-6 13/16	10-6 1/2	10 9/16
12	16-7 7/16	1-4 5/8	20-6	1-8 1/2	11-6	11 1/2
13	18-0 1/16		22-2 1/2		12-5 1/2	
14	19-4 11/16		23-11		13-5	
15	20-9 5/16		25-7 1/2		14-4 1/2	

TABLE OF SPACING
12" CENTERS 17"
16" CENTERS 22 1/16"
18" CENTERS 25 1/2"
20" CENTERS 28 5/16"
24" CENTERS 33 15/16"

Rise 12"
½ Pitch 45°

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		11/16		7/8		
3/4		1 1/16		1 5/16		
1	1-5	1 7/16	1-8 13/16	1 3/4	1-0	1
2	2-9 15/16	2 13/16	3-5 9/16	3 7/16	2-0	2
3	4-2 15/16	4 1/4	5-2 3/8	5 3/16	3-0	3
4	5-7 7/8	5 11/16	6-11 1/8	6 15/16	4-0	4
5	7-0 7/8	7 1/16	8-7 15/16	8 11/16	5-0	5
6	8-5 13/16	8 1/2	10-4 11/16	10 3/8	6-0	6
7	9-10 13/16	9 7/8	12-1 1/2	1-0 1/8	7-0	7
8	11-3 3/4	11 5/16	13-10 1/4	1-1 7/8	8-0	8
9	12-8 3/4	1-0 3/4	15-7 1/16	1-3 9/16	9-0	9
10	14-1 11/16	1-2 1/8	17-3 7/8	1-5 5/16	10-0	10
11	15-6 11/16	1-3 9/16	19-0 5/8	1-7 1/16	11-0	11
12	16-11 5/8	1-5	20-9 9/16	1-8 13/16	12-0	12
13	18-4 5/8		22-6 5/16		13-0	
14	19-9 9/16		24-3 3/16		14-0	
15	21-2 9/16		25-11 3/4		15-0	

ROOF TABLES

TABLE OF SPACING
12" CENTERS 17 5/16"
16" CENTERS 23 1/8"
18" CENTERS 26"
20" CENTERS 28 7/8"
24" CENTERS 34 5/8"

Rise 12½" 25/48 Pitch 46°10'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		3/4		7/8		
3/4		1 1/16		1 5/16		
1	1-5 5/16	1 7/16	1-9 1/16	1 3/4	1-0 1/2	1 1/16
2	2-10 11/16	2 7/8	3-6 3/16	3 1/2	2-1	2 1/16
3	4-4	4 5/16	5-3 1/4	5 1/4	3-1 1/2	3 1/8
4	5-9 5/16	5 3/4	7-0 5/16	7	4-2	4 3/16
5	7-2 5/8	7 1/4	8-9 3/8	8 13/16	5-2 1/2	5 3/16
6	8-8	8 11/16	10 6 7/16	10 9/16	6-3	6 1/4
7	10-1 5/16	10 1/8	12-3 9/16	1-0 5/16	7-3 1/2	7 5/16
8	11-6 5/8	11 9/16	14-0 5/8	1-2 1/16	8-4	8 5/16
9	12-11 15/16	1-1	5-9 11/16	1-3 13/16	9-4 1/2	9 3/8
10	14-5 1/4	1-2 7/16	17-6 3/4	1-5 9/16	10-5	10 7/16
11	15-10 5/8	1-3 7/8	19-3 7/8	1-7 5/16	11-5 1/2	11 7/16
12	17-3 15/16	1-5 5/16	21-0 15/16	1-9 1/16	12-6	1-0 1/2
13	18-9 1/4		22-10		13-6 1/2	
14	20-2 5/8		24-7 1/16		14-7	
15	21-7 15/16		26-4 3/16		15-7 1/2	

TABLE OF SPACING
12" CENTERS 17 1/16"
16" CENTERS 23 9/16"
18" CENTERS 26 5/16"
20" CENTERS 29 1/2"
24" CENTERS 35 3/8"

Rise 13" 13/24 Pitch 47°17'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		3/4		7/8		
3/4		1 1/8		1 5/16		
1	1-5 11/16	1 1/2	1-9 3/8	1 13/16	1-1	1 1/16
2	2-11 3/8	2 15/16	3-6 3/4	3 9/16	2-2	2 3/16
3	4-5 1/16	4 7/16	5-4 1/8	5 3/8	3-3	3 1/4
4	5-10 3/4	5 7/8	7-1 1/2	7 1/8	4-4	4 5/16
5	7-4 7/16	7 3/8	8-10 7/8	8 15/16	5-5	5 7/16
6	8-10 3/16	8 7/8	10-8 1/4	10 11/16	6-6	6 1/2
7	10-3 7/8	10 5/16	12-5 5/8	1-0 1/2	7-7	7 9/16
8	11-9 9/16	11 13/16	14-3	1-2 1/4	8-8	8 11/16
9	13-3 1/4	1-1 1/4	16-0 3/8	1-4 1/16	9-9	9 3/4
10	14-8 15/16	1-2 3/4	17-9 3/4	1-5 13/16	10-10	10 13/16
11	16-2 5/8	1-4 1/4	19-7 3/16	1-7 5/8	11-11	11 15/16
12	17-8 5/16	1-5 11/16	21-4 9/16	1-9 3/8	13-0	1-1
13	19-2		23-1 15/16		14-1	
14	20-7 11/16		24-11 5/16		15-2	
15	22-1 3/8		26-8 1/16		16-3	

TABLE OF SPACING
12" CENTERS 17 9/16"
16" CENTERS 24 1/16"
18" CENTERS 27 1/8"
20" CENTERS 30 1/8"
24" CENTERS 36 1/8"

Rise 13½" 27/48 Pitch 48°22'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		3/4		15/16		
3/4		1 1/8		1 3/8		
1	1-6 1/16	1 1/2	1-9 11/16	1 13/16	1-1 1/2	1 1/8
2	3-0 1/8	3	3-7 3/8	3 5/8	2-3	2 1/4
3	4-6 3/16	4 1/2	5-5 1/16	5 7/16	3-4 1/2	3 3/8
4	6-0 1/4	6	7-2 3/4	7 1/4	4-6	4 1/2
5	7-6 5/16	7 1/2	9-0 7/16	9 1/16	5-7 1/2	5 5/8
6	9-0 3/8	9 1/16	10-10 1/8	10 7/8	6-9	6 3/4
7	10-6 7/16	10 9/16	12-7 13/16	1-0 5/8	7-10 1/2	7 7/8
8	12-0 1/2	1-0 1/16	14-5 1/2	1-2 7/16	9-0	9
9	13-6 9/16	1-1 9/16	16-3 3/16	1-4 1/4	10-1 1/2	10 1/8
10	15-0 5/8	1-3 1/16	18-0 7/8	1-6 1/16	11-3	11 1/4
11	16-6 11/16	1-4 9/16	19-10 3/16	1-7 7/8	12-4 1/2	1-0 3/8
12	18-0 3/4	1-6 1/16	21-8 1/4	1-9 11/16	13-6	1-1 1/2
13	19-6 3/16		23-5 15/16		14-7 1/2	
14	21-0 7/8		25-3 5/8		15-9	
15	22-6 15/16		27-1 5/16		16-10 1/2	

TABLE OF SPACING
12" CENTERS 18 7/16"
16" CENTERS 24 9/16"
18" CENTERS 27 11/16"
20" CENTERS 30 3/4"
24" CENTERS 36 7/8"

Rise 14" 7/12 Pitch 49°24'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		3/4		15/16		
3/4		1 3/16		1 3/8		
1	1-6 7/16	1 9/16	1-10	1 13/16	1-2	1 3/16
2	3-0 7/8	3 1/16	3-8	3 11/16	2-4	2 5/16
3	4-7 5/16	4 5/8	5-6	5 1/2	3-6	3 1/2
4	6-1 3/4	6 1/8	7-4	7 5/16	4-8	4 11/16
5	7-8 3/16	7 11/16	9-2	9 3/16	5-10	5 13/16
6	9-2 5/8	9 1/4	11-0	11	7-0	7
7	10-9 1/16	10 3/4	12-10	1-0 13/16	8-2	8 3/16
8	12-3 1/2	1-0 5/16	14-8	1-2 1/16	9-4	9 5/16
9	13-9 15/16	1-1 13/16	16-6	1-4 1/2	10-6	10 1/2
10	15-4 3/8	1-3 3/8	18-4	1-6 5/16	11-8	11 11/16
11	16-10 13/16	1-4 5/16	20-2	1-8 3/16	12-10	1-0 13/16
12	18-5 1/4	1-6 7/16	22-0	1-10	14-0	1-2
13	19-1 11/16		23-10		15-2	
14	21-6 1/8		25-8		16-4	
15	23-0 5/8		27-6		17-6	

TABLE OF SPACING
12" CENTERS 18 13/16"
16" CENTERS 25 1/16"
18" CENTERS 28 1/4"
20" CENTERS 31 3/8"
24" CENTERS 37 5/8"

Rise 14½" 29/48 Pitch 50°24'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		3/8		7/16		
1/2		13/16		15/16		
3/4		1 3/16		1 3/8		
1	1-6 13/16	1 9/16	1-10 5/16	1 7/8	1-2 1/2	1 3/16
2	3-1 5/8	3 1/8	3-8 5/8	3 3/4	2-5	2 7/16
3	4-8 7/16	4 11/16	5-7	5 9/16	3-7 1/2	3 5/8
4	6-3 5/16	6 1/4	7-5 5/16	7 7/16	4-10	4 13/16
5	7-10 1/8	7 7/8	9-3 5/8	9 5/16	6-0 1/2	6 1/16
6	9-4 15/16	9 7/16	11-1 15/16	11 3/16	7-3	7 1/4
7	10-11 3/4	11	13-0 1/4	1-1	8-5 1/2	8 7/16
8	12-6 9/16	1-0 9/16	14-10 9/16	1-2 7/8	9-8	9 11/16
9	14-1 3/8	1-2 1/8	16-8 7/8	1-4 3/4	10-10 1/2	10 7/8
10	15-8 1/4	1-3 11/16	18-7 1/4	1-6 5/8	12-1	1-0 1/16
11	17-3 1/16	1-5 1/4	20-5 9/16	1-8 7/16	13-3 1/2	1-1 5/16
12	18-9 7/8	1-6 13/16	22-3 7/8	1-10 5/16	14-6	1-2 1/2
13	20-4 11/16		24-2 3/16		15-8 1/2	
14	21-11 1/2		26-0 1/2		16-11	
15	23-6 5/16		27-10 13/16		18-1 1/2	

TABLE OF SPACING
12" CENTERS 19 3/16"
16" CENTERS 25 9/16"
18" CENTERS 28 1/8"
20" CENTERS 32"
24" CENTERS 38 3/8"

Rise 15" 15/24 Pitch 51°21'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		7/16		1/2		
1/2		13/16		15/16		
3/4		1 3/16		1 7/16		
1	1-7 3/16	1 5/8	1-10 5/8	1 7/8	1-3	1 1/4
2	3-2 7/16	3 3/16	3-9 5/16	3 3/4	2-6	2 1/2
3	4-9 5/8	4 13/16	5-7 15/16	5 11/16	3-9	3 3/4
4	6-4 13/16	6 3/8	7-6 5/8	7 9/16	5-0	5
5	8-0 1/16	8	9-5 1/4	9 7/16	6-3	6 1/4
6	9-7 1/4	9 5/8	11-3 7/8	11 5/16	7-6	7 1/2
7	11-2 7/16	11 3/16	13-2 9/16	1-1 1/4	8-9	8 3/4
8	12-9 11/16	1-0 13/16	15-1 3/16	1-3 1/8	10-0	10
9	14-4 7/8	1-2 7/16	16-11 7/8	1-5	11-3	11 1/4
10	16-0 1/8	1-4	18-10 1/2	1-6 7/8	12-6	1-0 1/2
11	17-7 5/16	1-5 5/8	20-9 1/8	1-8 3/4	13-9	1-1 3/4
12	19-2 1/2	1-7 3/16	22-7 13/16	1-10 5/8	15-0	1-3
13	20-9 3/4		24-6 7/16		16-3	
14	22-4 15/16		26-5 1/8		17-6	
15	24-0 1/8		28-3 3/4		18-9	

HOMASOTE COMPANY - TRENTON, NEW JERSEY

W. HENRY NEUBECK - ARCHITECT

HOMASOTE PRECISION-BUILT HOMES

SHEET N° 12

ROOF TABLES

TABLE OF SPACING
12" CENTERS 19 5/8"
16" CENTERS 26 3/16"
18" CENTERS 29 7/16"
20" CENTERS 32 11/16"
24" CENTERS 39 1/4"

Rise 15½"
31/48 Pitch 52°15'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		7/16		1/2		
½		13/16		15/16		
¾		1 1/4		1 7/16		
1	1-7 5/8	1 5/8	1-11	1 15/16	1-3 1/2	1 5/16
2	3-3 3/16	3 1/4	3-10	3 13/16	2-7	2 9/16
3	4-10 13/16	4 15/16	5-8 15/16	5 3/4	3-10 1/2	3 7/8
4	6-6 7/16	6 9/16	7-7 15/16	7 11/16	5-2	5 3/16
5	8-2	8 3/16	9-6 15/16	9 9/16	6-5 1/2	6 7/16
6	9-9 5/8	9 13/16	11-5 15/16	11 1/2	7-9	7 3/4
7	11-5 1/4	11 7/16	13-4 7/8	1-1 7/16	9-0 1/2	9 1/16
8	13-0 13/16	1-1 1/16	15-3 7/8	1-3 5/16	10-4	10 5/16
9	14-8 7/16	1-2 11/16	17-2 7/8	1-5 1/4	11-7 1/2	11 5/8
10	16-4	1-4 5/16	19-1 7/8	1-7 3/16	12-11	1-0 15/16
11	17-11 5/8	1-6	21-0 13/16	1-9 1/16	14-2 1/2	1-2 3/16
12	19-7 1/4	1-7 5/8	22-11 13/16	1-11	15-6	1-3 1/2
13	21-2 13/16		24-10 13/16		16-9 1/2	
14	22-10 7/16		26-9 3/4		18-1	
15	24-6 1/16		28-8 3/4		19-4 1/2	

TABLE OF SPACING
12" CENTERS 20"
16" CENTERS 26 11/16"
18" CENTERS 30"
20" CENTERS 33 5/16"
24" CENTERS 40"

Rise 16"
2/3 Pitch 53°8'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		7/16		1/2		
½		13/16		1		
¾		1 1/4		1 7/16		
1	1-8	1 11/16	1-11 5/16	1 15/16	1-4	1 5/16
2	3-4	3 5/16	3-10 5/8	3 7/8	2-8	2 11/16
3	5-0	5	5-10	5 13/16	4-0	4
4	6-8	6 11/16	7-9 5/16	7 3/4	5-4	5 5/16
5	8-4	8 5/16	9-8 5/8	9 3/4	6-8	6 11/16
6	10-0	10	11-7 15/16	11 11/16	8-0	8
7	11-8	11 11/16	13-7 1/4	1-1 5/8	9-4	9 5/16
8	13-4	1-1 5/16	15-6 5/8	1-3 9/16	10-8	10 11/16
9	15-0	1-3	17-5 15/16	1-5 1/2	12-0	1-0
10	16-8	1-4 11/16	19-5 1/4	1-7 7/16	13-4	1-1 5/16
11	18-4	1-6 5/16	21-4 9/16	1-9 3/8	14-8	1-2 11/16
12	20-0	1-8	23-3 7/8	1-11 5/16	16-0	1-4
13	21-8		25-3 1/4		17-4	
14	23-4		27-2 9/16		18-8	
15	25-0		29-1 7/8		20-0	

TABLE OF SPACING
12" CENTERS 20 7/16"
16" CENTERS 27 1/4"
18" CENTERS 30 5/8"
20" CENTERS 34"
24" CENTERS 40 13/16"

Rise 16½"
33/48 Pitch 53°58'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		7/16		1/2		
½		7/8		1		
¾		1 1/4		1 1/2		
1	1-8 7/16	1 11/16	1-11 11/16	2	1-4 1/2	1 3/8
2	3-4 13/16	3 7/16	3-11 5/16	3 15/16	2-9	2 3/4
3	5-1 3/16	5 1/8	5-11	5 15/16	4-1 1/2	4 1/8
4	6-9 5/8	6 13/16	7-10 11/16	7 7/8	5-6	5 1/2
5	8-6	8 1/2	9-10 3/8	9 7/8	6-10 1/2	6 7/8
6	10-2 7/16	10 3/16	11-10	11 13/16	8-3	8 1/4
7	11-10 13/16	11 15/16	13-9 11/16	1-1 13/16	9-7 1/2	9 5/8
8	13-7 1/4	1-1 5/8	15-9 3/8	1-3 3/4	11-0	11
9	15-3 5/8	1-3 5/16	17-9	1-5 3/4	12-4 1/2	1-0 3/8
10	17-0	1-5	19-8 11/16	1-7 3/4	13-9	1-1 3/4
11	18-8 7/16	1-6 11/16	21-8 3/8	1-9 11/16	15-1 1/2	1-3 1/8
12	20-4 13/16	1-8 7/16	23-8 1/16	1-11 11/16	16-6	1-4 1/2
13	22-1 1/4		25-7 11/16		17-10 1/2	
14	23-9 5/8		27-7 3/8		19-3	
15	25-6 1/16		29-7 1/16		20-7 1/2	

TABLE OF SPACING
12" CENTERS 20 13/16"
16" CENTERS 27 3/4"
18" CENTERS 31 1/4"
20" CENTERS 34 11/16"
24" CENTERS 41 5/8"

Rise 17"
17/24 Pitch 54°47'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		7/16		1/2		
½		7/8		1		
¾		1 5/16		1 1/2		
1	1-8 13/16	1 3/4	2-0	2	1-5	1 7/16
2	3-5 5/8	3 7/16	4-0 1/16	4	2-10	2 13/16
3	5-2 7/16	5 3/16	6-0 1/16	6	4-3	4 1/4
4	6-11 1/4	6 15/16	8-0 1/16	8	5-8	5 11/16
5	8-8 1/16	8 11/16	10-0 1/8	10	7-1	7 1/16
6	10-4 7/8	10 7/16	12-0 1/8	1-0	8-6	8 1/2
7	12-1 11/16	1-0 1/8	14-0 1/8	1-2	9-11	9 15/16
8	13-10 1/2	1-1 7/8	16-0 3/16	1-4	11-4	11 5/16
9	15-7 1/4	1-3 5/8	18-0 3/16	1-6	12-9	1-0 3/4
10	17-4 1/16	1-5 5/8	20-0 3/16	1-8	14-2	1-2 3/16
11	19-0 7/8	1-7 1/16	22-0 1/4	1-10	15-7	1-3 9/16
12	20-9 11/16	1-8 13/16	24-0 1/4	2-0	17-0	1-5
13	22-6 1/2		26-0 1/4		18-5	
14	24-3 5/16		28-0 5/16		19-10	
15	26-0 1/8		30-0 5/16		21-3	

TABLE OF SPACING
12" CENTERS 21 1/4"
16" CENTERS 28 5/16"
18" CENTERS 31 7/8"
20" CENTERS 35 3/8"
24" CENTERS 42 7/16"

Rise 17½"
35/48 Pitch 55°34'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		7/16		1/2		
½		7/8		1		
¾		1 5/16		1 1/2		
1	1-9 1/4	1 3/4	2-0 3/8	2 1/16	1-5 1/2	1 7/16
2	3-6 7/16	3 9/16	4-0 3/4	4 1/16	2-11	2 15/16
3	5-3 11/16	5 5/16	6-1 1/8	6 1/8	4-4 1/2	4 3/8
4	7-0 7/8	7 1/16	8-1 1/2	8 1/8	5-10	5 13/16
5	8-10 1/8	8 7/8	10-1 7/8	10 3/16	7-3 1/2	7 5/16
6	10-7 5/16	10 5/8	12-2 1/4	1-0 3/16	8-9	8 3/4
7	12-4 9/16	1-0 3/8	14-2 5/8	1-2 1/4	10-2 1/2	10 3/16
8	14-1 3/4	1-2 1/8	16-3	1-4 1/4	11-8	11 11/16
9	15-11	1-3 15/16	18-3 3/8	1-6 5/16	13-1 1/2	1-1 1/8
10	17-8 3/16	1-5 11/16	20-3 3/4	1-8 5/16	14-7	1-2 9/16
11	19-5 7/16	1-7 7/16	22-4 3/16	1-10 3/8	16-0 1/2	1-4 1/16
12	21-2 5/8	1-9 1/4	24-4 9/16	2-0 3/8	17-6	1-5 1/2
13	22-11 7/8		26-4 15/16		18-11 1/2	
14	24-9 1/16		28-5 5/16		20-5	
15	26-6 5/16		30-5 11/16		21-10 1/2	

TABLE OF SPACING
12" CENTERS 21 5/8"
16" CENTERS 28 7/8"
18" CENTERS 32 7/16"
20" CENTERS 36 1/16"
24" CENTERS 43 1/4"

Rise 18"
3/4 Pitch 56°19'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		7/16		1/2		
½		15/16		1 1/16		
¾		1 3/8		1 9/16		
1	1-9 5/8	1 13/16	2-0 3/4	2 1/16	1-6	1 1/2
2	3-7 1/4	3 5/8	4-1 1/2	4 1/8	3-0	3
3	5-4 7/8	5 7/16	6-2 1/4	6 3/16	4-6	4 1/2
4	7-2 9/16	7 1/4	8-2 15/16	8 1/4	6-0	6
5	9-0 3/16	9	10-3 11/16	10 5/16	7-6	7 1/2
6	10-9 13/16	10 13/16	12-4 7/16	1-0 3/8	9-0	9
7	12-7 7/16	1-0 5/8	14-5 3/16	1-2 7/16	10-6	10 1/2
8	14-5 1/16	1-2 7/16	16-5 15/16	1-4 1/2	12-0	1-0
9	16-2 11/16	1-4 1/4	18-6 5/8	1-6 9/16	13-6	1-1 1/2
10	18-0 5/16	1-6	20-7 3/8	1-8 5/8	15-0	1-3
11	19-10	1-7 13/16	22-8 1/8	1-10 11/16	16-6	1-4 1/2
12	21-7 5/8	1-9 5/8	24-8 7/8	2-0 3/4	18-0	1-6
13	23-5 1/4		26-9 5/8		19-6	
14	25-2 7/8		28-10 3/8		21-0	
15	27-0 1/2		30-11 1/16		22-6	

W. HENRY NEUBECK - ARCHITECT

ROOF TABLES

TABLE OF SPACING
12" CENTERS 22 1/16"
16" CENTERS 29 7/16"
18" CENTERS 33 1/16"
20" CENTERS 36 3/4"
24" CENTERS 44 1/8"

Rise 18 1/2" 37/48 Pitch 57°2'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		7/16		1/2		
1/2		15/16		1 1/16		
3/4		1 3/8		1 9/16		
1	1-10 1/16	1 13/16	2-1 1/8	2 1/8	1-6 1/2	1 9/16
2	3-8 1/8	3 11/16	4-2 3/16	4 3/16	3-1	3 1/16
3	5-6 1/8	5 1/2	6-3 5/16	6 1/4	4-7 1/2	4 5/8
4	7-4 3/16	7 3/8	8-4 7/16	8 3/8	6-2	6 3/16
5	9-2 1/4	9 3/16	10-5 1/2	10 7/16	7-8 1/2	7 11/16
6	11-0 5/16	11	12-6 5/8	1-0 9/16	9-3	9 1/4
7	12-10 3/8	1-0 7/8	14-7 3/4	1-2 5/8	10-9 1/2	10 13/16
8	14-8 7/16	1-2 11/16	16-8 13/16	1-4 3/4	12-4	1-0 5/16
9	16-6 7/16	1-4 9/16	18-9 15/16	1-6 13/16	13-10 1/2	1-1 7/8
10	18-4 1/2	1-6 3/8	20-11 1/16	1-8 15/16	15-5	1-3 7/16
11	20-2 9/16	1-8 3/16	23-0 3/16	1-11	16-11 1/2	1-4 15/16
12	22-0 5/8	1-10 1/16	25-1 1/4	2-1 1/8	18-6	1-6 1/2
13	23-10 11/16		27-2 3/8		20-0 1/2	
14	25-8 11/16		29-3 1/2		21-7	
15	27-6 3/4		31-4 9/16		23-1 1/2	

TABLE OF SPACING
12" CENTERS 22 1/2"
16" CENTERS 30"
18" CENTERS 33 3/4"
20" CENTERS 37 1/2"
24" CENTERS 45"

Rise 19" 19/24 Pitch 57°44'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		7/16		1/2		
1/2		15/16		1 1/16		
3/4		1 3/8		1 9/16		
1	1-10 1/2	1 7/8	2-1 1/2	2 1/8	1-7	1 9/16
2	3-8 15/16	3 3/4	4-2 15/16	4 1/4	3-2	3 3/16
3	5-7 7/16	5 5/8	6-4 7/16	6 3/8	4-9	4 3/4
4	7-5 7/8	7 1/2	8-5 7/8	8 1/2	6-4	6 5/16
5	9-4 3/8	9 3/8	10-7 3/8	10 5/8	7-11	7 15/16
6	11-2 13/16	11 1/4	12-8 7/8	1-0 3/4	9-6	9 1/2
7	13-1 5/16	1-1 1/8	14-10 5/16	1-2 7/8	11-1	11 1/16
8	14-11 3/4	1-3	16-11 13/16	1-5	12-8	1-0 11/16
9	16-10 1/4	1-4 7/8	19-1 5/16	1-7 1/8	14-3	1-2 1/4
10	18-8 3/4	1-6 3/4	21-2 3/4	1-9 1/4	15-10	1-3 13/16
11	20-7 3/16	1-8 5/8	23-4 1/4	1-11 3/8	17-5	1-5 7/16
12	22-5 11/16	1-10 1/2	25-5 11/16	2-1 1/2	19-0	1-7
13	24-4 1/8		27-7 3/16		20-7	
14	26-2 5/8		29-8 11/16		22-2	
15	28-1 1/16		31-10 1/8		23-9	

TABLE OF SPACING
12" CENTERS 22 7/8"
16" CENTERS 30 1/2"
18" CENTERS 34 5/16"
20" CENTERS 38 1/8"
24" CENTERS 45 3/4"

Rise 19 1/2" 39/48 Pitch 58°24'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/2		9/16		
1/2		15/16		1 1/16		
3/4		1 7/16		1 5/8		
1	1-10 7/8	1 15/16	2-1 7/8	2 3/16	1-7 1/2	1 5/8
2	3-9 13/16	3 13/16	4-3 11/16	4 5/16	3-3	3 1/4
3	5-8 11/16	5 3/4	6-5 9/16	6 7/16	4-10 1/2	4 7/8
4	7-7 9/16	7 5/8	8-7 3/8	8 5/8	6-6	6 1/2
5	9-6 1/2	9 9/16	10-9 1/4	10 3/4	8-1 1/2	8 1/8
6	11-5 3/8	11 7/16	12-11 1/8	1-0 15/16	9-9	9 3/4
7	13-4 1/4	1-1 3/8	15-0 15/16	1-3 1/16	11-4 1/2	11 3/8
8	15-3 3/16	1-3 1/4	17-2 13/16	1-5 1/4	13-0	1-1
9	17-2 1/16	1-5 3/16	19-4 5/8	1-7 3/8	14-7 1/2	1-2 5/8
10	19-0 15/16	1-7 1/16	21-6 1/2	1-9 9/16	16-3	1-4 1/4
11	20-11 7/8	1-9	23-8 3/8	1-11 11/16	17-10 1/2	1-5 7/8
12	22-10 3/4	1-10 7/8	25-10 3/16	2-1 7/8	19-6	1-7 1/2
13	24-9 5/8		28-0 1/16		21-1 1/2	
14	26-8 9/16		30-1 7/8		22-9	
15	28-7 7/16		32-3 3/4		24-4 1/2	

TABLE OF SPACING
12" CENTERS 23 5/16"
16" CENTERS 31 1/16"
18" CENTERS 35"
20" CENTERS 38 7/8"
24" CENTERS 46 5/8"

Rise 20" 5/6 Pitch 59°2'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/2		9/16		
1/2		1		1 1/8		
3/4		1 7/16		1 5/8		
1	1-11 5/16	1 15/16	2-2 1/4	2 3/16	1-8	1 11/16
2	3-10 5/8	3 7/8	4-4 7/16	4 3/8	3-4	3 5/16
3	5-10	5 13/16	6-6 11/16	6 9/16	5-0	5
4	7-9 5/16	7 3/4	8-8 15/16	8 3/4	6-8	6 11/16
5	9-8 5/8	9 3/4	10-11 1/8	10 15/16	8-4	8 5/16
6	11-7 15/16	11 11/16	13-1 3/8	1-1 1/8	10-0	10
7	13-7 1/4	1-1 5/8	15-3 5/8	1-3 5/16	11-8	11 11/16
8	15-6 5/8	1-3 9/16	17-5 13/16	1-5 1/2	13-4	1-1 5/16
9	17-5 15/16	1-5 1/2	19-8 1/16	1-7 11/16	15-0	1-3
10	19-5 1/4	1-7 7/16	21-10 5/16	1-9 7/8	16-8	1-4 11/16
11	21-4 9/16	1-9 3/8	24-0 1/2	2-0 1/16	18-4	1-6 5/16
12	23-3 7/8	1-11 5/16	26-2 3/4	2-2 1/4	20-0	1-8
13	25-3 3/16		28-5		21-8	
14	27-2 9/16		30-7 3/16		23-4	
15	29-1 7/8		32-9 7/16		25-0	

TABLE OF SPACING
12" CENTERS 23 3/4"
16" CENTERS 31 11/16"
18" CENTERS 35 5/8"
20" CENTERS 39 9/16"
24" CENTERS 47 1/2"

Rise 20 1/2" 41/48 Pitch 59°39'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/2		9/16		
1/2		1		1 1/8		
3/4		1 1/2		1 11/16		
1	1-11 3/4	2	2-2 5/8	2 1/4	1-8 1/2	1 11/16
2	3-11 1/2	3 15/16	4-5 1/4	4 7/16	3-5	3 7/16
3	5-11 1/4	5 15/16	6-7 13/16	6 5/8	5-1 1/2	5 1/8
4	7-11	7 15/16	8-10 7/16	8 7/8	6-10	6 13/16
5	9-10 3/4	9 7/8	11-1 1/16	11 1/16	8-6 1/2	8 9/16
6	11-10 1/2	11 7/8	13-3 11/16	1-1 5/16	10-3	10 1/4
7	13-10 1/4	1-1 7/8	15-6 5/16	1-3 1/2	11-11 1/2	11 15/16
8	15-10 1/16	1-3 13/16	17-8 7/8	1-5 3/4	13-8	1-1 11/16
9	17-9 13/16	1-5 13/16	19-11 1/2	1-7 15/16	15-4 1/2	1-3 3/8
10	19-9 9/16	1-7 13/16	22-2 1/8	1-10 3/16	17-1	1-5 1/16
11	21-9 5/16	1-9 3/4	24-4 3/4	2-0 3/8	18-9 1/2	1-6 13/16
12	23-9 1/16	1-11 3/4	26-7 3/8	2-2 5/8	20-6	1-8 1/2
13	25-8 13/16		28-9 15/16		22-2 1/2	
14	27-8 9/16		31-0 9/16		23-11	
15	29-8 5/16		33-3 3/16		25-7 1/2	

TABLE OF SPACING
12" CENTERS 24 3/16"
16" CENTERS 32 1/4"
18" CENTERS 36 5/16"
20" CENTERS 40 5/16"
24" CENTERS 48 3/8"

Rise 21" 7/8 Pitch 60°15'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
1/4		1/2		9/16		
1/2		1		1 1/8		
3/4		1 1/2		1 11/16		
1	2-0 3/16	2	2-3	2 1/4	1-9	1 3/4
2	4-0 3/8	4 1/16	4-6	4 1/2	3-6	3 1/2
3	6-0 9/16	6 1/16	6-9	6 3/4	5-3	5 1/4
4	8-0 3/4	8 1/16	9-0	9	7-0	7
5	10-0 15/16	10 1/16	11-3	11 1/4	8-9	8 3/4
6	12-1 1/8	1-0 1/8	13-6	1-1 1/2	10-6	10 1/2
7	14-1 5/16	1-2 1/8	15-9	1-3 3/4	12-3	1-0 1/4
8	16-1 1/2	1-4 1/8	18-0	1-6	14-0	1-2
9	18-1 11/16	1-6 1/8	20-3	1-8 1/4	15-9	1-3 3/4
10	20-1 7/8	1-8 3/16	22-6	1-10 1/2	17-6	1-5 1/2
11	22-2 1/16	1-10 3/16	24-9	2-0 3/4	19-3	1-7 1/4
12	24-2 1/4	2-0 3/16	27-0	2-3	21-0	1-9
13	26-2 7/16		29-3		22-9	
14	28-2 5/8		31-6		24-6	
15	30-2 13/16		33-9		26-3	

ROOF TABLES

TABLE OF SPACING
12" CENTERS 24 5/8"
16" CENTERS 32 13/16"
18" CENTERS 36 15/16"
20" CENTERS 41 1/16"
24" CENTERS 49 1/4"

Rise 21½"
43/48 Pitch 60°50'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		½		9/16		
½		1		1 1/8		
¾		1 9/16		1 11/16		
1	2-0 5/8	2 1/16	2-3 3/8	2 5/16	1-9½	1 13/16
2	4-1¼	4 1/8	4-6 13/16	4 9/16	3-7	3 9/16
3	6-1 7/8	6 3/16	6-10 3/16	6 7/8	5-4½	5 3/8
4	8-2½	8 3/16	9-1 9/16	9 1/8	7-2	7 3/16
5	10-3 1/8	10 1/4	11-4 15/16	11 7/16	8-11½	8 15/16
6	12-3¾	1-0 5/16	13-8 3/8	1-1 11/16	10-9	10¾
7	14-4 3/8	1-2 3/8	15-11¾	1-4	12-6½	1-0 9/16
8	16-5	1-4 7/16	18-3 1/8	1-6¼	14-4	1-2 5/16
9	18-5 5/8	1-6½	20-6½	1-8 9/16	16-1½	1-4⅛
10	20-6¼	1-8½	22-9 15/16	1-10 13/16	17-11	1-5 15/16
11	22-6 7/8	1-10 9/16	25-1 5/16	2-1⅛	19-8½	1-7 11/16
12	24-7½	2-0 5/8	27-4 11/16	2-3 3/8	21-6	1-9½
13	26-8 1/8		29-8 1/16		23-3½	
14	28-8¾		31-11½		25-1	
15	30-9 3/8		34-2 7/8		26-10½	

TABLE OF SPACING
12" CENTERS 25 1/16"
16" CENTERS 33 7/16"
18" CENTERS 37 5/8"
20" CENTERS 41¾"
24" CENTERS 50 1/8"

Rise 22"
11/12 Pitch 61°23'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		½		9/16		
½		1 1/16		1 3/16		
¾		1 9/16		1¾		
1	2-1 1/16	2 1/16	2-3 13/16	2 5/16	1-10	1 13/16
2	4-2⅛	4 3/16	4-7 9/16	4 5/8	3-8	3 11/16
3	6-3 3/16	6¼	6-11⅜	6 15/16	5-6	5½
4	8-4¼	8⅜	9-3 1/8	9¼	7-4	7 5/16
5	10-5 5/16	10 7/16	11-6 15/16	11 9/16	9-2	9 3/16
6	12-6⅜	1-0 9/16	13-10 11/16	1-1⅞	11-0	11
7	14-7 7/16	1-2⅝	16-2½	1-4 3/16	12-10	1-0 13/16
8	16-8½	1-4 11/16	18-6¼	1-6½	14-8	1-2 11/16
9	18-9 9/16	1-6 13/16	20-10 1/16	1-8 13/16	16-6	1-4½
10	20-10 5/8	1-8 7/8	23-1⅞	1-11 3/16	18-4	1-6 5/16
11	22-11 5/8	1-11	25-5 5/8	2-1½	20-2	1-8 3/16
12	25-0 11/16	2-1 1/16	27-9 7/16	2-3 13/16	22-0	1-10
13	27-1¾		30-1 3/16		23-10	
14	29-2 13/16		32-5		25-8	
15	31-3 7/8		34-8¾		27-6	

TABLE OF SPACING
12" CENTERS 25½"
16" CENTERS 34"
18" CENTERS 38 1/8"
20" CENTERS 42½"
24" CENTERS 51"

Rise 22½"
15/16 Pitch 61°56'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		½		9/16		
½		1 1/16		1 3/16		
¾		1 5/8		1¾		
1	2-1½	2⅛	2-4 3/16	2⅜	1-10½	1⅞
2	4-3	4¼	4-8⅛	4 11/16	3-9	3¾
3	6-4½	6⅜	7-0 9/16	7 1/16	5-7½	5⅝
4	8-6	8½	9-4¾	9⅜	7-6	7½
5	10-7½	10⅝	11-8 15/16	11¾	9-4½	9⅜
6	12-9	1-0¾	14-1 1/16	1-2 1/16	11-3	11¼
7	14-10½	1-2⅞	16-5¼	1-4 7/16	13-1½	1-1⅛
8	17-0	1-5	18-9 7/16	1-6 13/16	15-0	1-3
9	19-1½	1-7⅛	21-1⅝	1-9⅛	16-10½	1-4⅞
10	21-3	1-9¼	23-5 13/16	1-11½	18-9	1-6¾
11	23-4½	1-11⅜	25-10	2-1 13/16	20-7½	1-8⅝
12	25-6	2-1½	28-2 3/16	2-4 3/16	22-6	1-10½
13	27-7½		30-6⅜		24-4½	
14	29-9		32-10 9/16		26-3	
15	31-10½		35-2¾		28-1½	

TABLE OF SPACING
12" CENTERS 25 15/16"
16" CENTERS 34 9/16"
18" CENTERS 38 15/16"
20" CENTERS 43¼"
24" CENTERS 51⅞"

Rise 23"
23/24 Pitch 62°27'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		9/16		5/8		
½		1 1/16		1 3/16		
¾		1 5/8		1 13/16		
1	2-1 15/16	2 3/16	2-4 9/16	2⅜	1-11	1 15/16
2	4-3⅞	4 5/16	4-9 3/16	4¾	3-10	3 13/16
3	6-5 13/16	6½	7-1¾	7⅛	5-9	5¾
4	8-7¾	8 5/8	9-6 5/16	9½	7-8	7 11/16
5	10-9 11/16	10 13/16	11-10 15/16	11 15/16	9-7	9 9/16
6	12-11 5/8	1-1	14-3½	1-2 5/16	11-6	11½
7	15-1⅝	1-3⅛	16-8 1/16	1-4 11/16	13-5	1-1 7/16
8	17-3 9/16	1-5 5/16	19-0 11/16	1-7 1/16	15-4	1-3 5/16
9	19-5½	1-7 7/16	21-5¼	1-9 7/16	17-3	1-5¼
10	21-7 7/16	1-9⅝	23-9 13/16	1-11 13/16	19-2	1-7⅜
11	23-9⅜	1-11 13/16	26-2 7/16	2-2 3/16	21-1	1-9 1/16
12	25-11 5/16	2-1 15/16	28-7	2-4 9/16	23-0	1-11
13	28-1¼		30-11 9/16		24-11	
14	30-3 3/16		33-4 3/16		26-10	
15	32-5⅛		35-8¾		28-9	

TABLE OF SPACING
12" CENTERS 26 3/8"
16" CENTERS 35 3/16"
18" CENTERS 39 9/16"
20" CENTERS 43 15/16"
24" CENTERS 52¾"

Rise 23½"
47/48 Pitch 62°57'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		9/16		5/8		
½		1⅛		1 3/16		
¾		1⅝		1 13/16		
1	2-2⅜	2 3/16	2-5	2 7/16	1-11½	1 15/16
2	4-4¾	4⅜	4-10	4 13/16	3-11	3 15/16
3	6-7 1/16	6 5/8	7-2 15/16	7¼	5-10½	5⅞
4	8-9 9/16	8 13/16	9-7 15/16	9 11/16	7-10	7 13/16
5	10-11 15/16	11	12-0 15/16	1-0 1/16	9-9½	9 13/16
6	13-2 5/16	1-1 3/16	14-5 13/16	1-2½	11-9	11¾
7	15-4 11/16	1-3⅝	16-10 15/16	1-4 15/16	13-8½	1-1 11/16
8	17-7 1/16	1-5 9/16	19-3⅞	1-7 5/16	15-8	1-3 11/16
9	19-9½	1-7 13/16	21-8⅞	1-9¾	17-7½	1-5⅝
10	21-11⅞	1-10	24-1⅞	2-0 3/16	19-7	1-7 9/16
11	24-2¼	2-0 3/16	26-6⅞	2-2 9/16	21-6½	1-9 9/16
12	26-4⅝	2-2⅜	28-11⅞	2-5	23-6	1-11½
13	28-7		31-4 13/16		25-5½	
14	30-9⅜		33-9 13/16		27-5	
15	32-11 13/16		36-2 13/16		29-4½	

TABLE OF SPACING
12" CENTERS 26 13/16"
16" CENTERS 35¾"
18" CENTERS 40¼"
20" CENTERS 44 11/16"
24" CENTERS 53 11/16"

Rise 24"
1 Pitch 63°26'

RUN	COMMON AND JACK RAFTERS		HIP AND VALLEY		TOTAL RISE	
	Feet	Inches	Feet	Inches	Feet	Inches
¼		9/16		5/8		
½		1⅛		1¼		
¾		1 11/16		1 13/16		
1	2-2 13/16	2¼	2-5⅜	2 7/16	2-0	2
2	4-5 11/16	4½	4-10 13/16	4⅞	4-0	4
3	6-8½	6 11/16	7-4⅜	7⅜	6-0	6
4	8-11 5/16	8 15/16	9-9 9/16	9 13/16	8-0	8
5	11-2 3/16	11 3/16	12-3	1-0¼	10-0	10
6	13-5	1-1 7/16	14-8⅜	1-2 11/16	12-0	1-0
7	15-7⅞	1-3 11/16	17-1¾	1-5⅛	14-0	1-2
8	17-10 11/16	1-5⅞	19-7⅛	1-7⅝	16-0	1-4
9	20-1½	1-8⅛	22-0 9/16	1-10 1/16	18-0	1-6
10	22-4 5/16	1-10⅜	24-5 15/16	2-0½	20-0	1-8
11	24-7 1/16	2-0 5/8	26-11 5/16	2-2 15/16	22-0	1-10
12	26-10	2-2 13/16	29-4¾	2-5⅜	24-0	2-0
13	29-0 13/16		31-10⅛		26-0	
14	31-3 11/16		34-3½		28-0	
15	33-6½		36-8 15/16		30-0	

W. HENRY NEUBECK - ARCHITECT

MEMORANDUM SPECIFICATIONS

COVERING

MINIMUM STANDARDS OF

MATERIALS AND CONSTRUCTION

For

HOMASOTE PRECISION-BUILT HOMES

To Be Used In

_____

Describe Type of House

_____

Owner

_____

Location

_____

_____

Architect

_____

Builder

_____

Lending Institution

_____ _____

Date

MEMORANDUM SPECIFICATIONS

COVERING

MINIMUM STANDARDS OF
MATERIALS AND CONSTRUCTION

To Be Used In

PRECISION-BUILT HOMES

1. EXCAVATION WORK

a. Kind of Soil.....
(Rock,Clay,Sand,Filled Ground)

All ground upon which foundations rest must be able to support the superimposed load without subsidence.

Placing of footings and other foundations upon filled ground is not desirable. Filled ground shall be thoroughly tested and approved by a competent authority before being built upon.

b. Depth of Excavation.....

All foundations unless on rock must be sufficiently below finished grade line to avoid damage by frost. The minimum depth of foundations is generally given in local building codes.

c. Farm Tile Drain. Is it to be used around foundations, etc.? Give particulars.....
.....
.....

In all excavations where accumulation of water is likely to occur, foundations and basements shall be kept dry by placing a continuous row of 4" unglazed farm tile drain in a bed of stone or cinders around the outside of the wall at the level of the footings and below the basement floor level, and if necessary, a row or rows under the basement floor. All shall be connected through a running trap to the main drain or to other waste water system.

2. WATERPROOF FOUNDATION WALLS, etc. Give brief description.....
.....
.....
.....

All foundation walls below grade shall be made watertight either by using a waterproof concrete in the foundation walls, the concrete being specially mixed to obtain this quality, or by applying a coating of coal-tar pitch, or an asphalted or other waterproof membrane to the outside of the walls below

grade, or by parging the walls inside or outside with waterproof cement mortar, or by other suitable means. Basement floors shall also be made waterproof by any approved method, dependent upon the nature of the soil. Concrete block foundation walls are to be parged with cement mortar before applying the waterproofing.

3. GRADING AND PLANTING: State briefly the extent of the work contemplated.....
.....
.....
.....

4. WALKS AND DRIVEWAYS. Describe briefly their extent, nature, and material to be used in the fill and in the top surface....
.....
.....
.....

For sidewalks use a thin bed of gravel, stone, broken brick, or cinders with a fine gravel surface. For driveways a 6" bed of stone gravel, brick, or cinders with a fine gravel surface well rolled.

5. FOOTINGS--Materials.....

Footings either of concrete or of masonry shall be of sufficient width and thickness to spread the load safely upon the soil, having due regard to its nature.

6. FOUNDATION WALLS--Materials.....
.....

Exterior foundation walls shall be of solid concrete or masonry, and of the thickness required by local building codes. All exposed walls above grade shall be cleaned down and dressed, faced or pointed as desired.

Minimum requirements for concrete for foundation walls, etc.

Concrete shall be laid in sound forms, erected true to line and well braced against deflection under load. The ingredients of the concrete shall be measured and shall consist of not more than three parts sand and five parts crushed stone up to 2" size to one part of cement by volume. Good clean gravel and sand up to six parts by volume to one part of cement may be used. The use of very wet concrete is to be avoided since the strength of concrete diminishes rapidly if more water is used than that necessary to make a plastic mass. It is strongly recommended that wherever facilities exist to provide proper supervision of the mixing and testing of concrete, "2,000 lb. concrete" be used in foundation walls.

7. BASEMENT FLOORS: Describe briefly the construction to be used...
.....
.....
.....

In general, basement floors shall be finished in cement, trowelled smooth, laid integrally by preference, on a 3" to 4" bed of cinder. Cinder fill under basement floor shall not come in contact with cast iron drainpipe. The concrete used for basement floors shall consist of not more than three parts of sand and five parts stone or gravel to one part of cement by volume.

8. BASEMENT FLOOR DRAIN--State type and where connected.....
.....
.....

9. OUTSIDE WALLS--Give brief description of outside finish, whether sand finish, brick veneer, clapboards, shingles, or stone veneer.....
.....
.....
.....

a. Sand Finish shall be applied directly to the Homasote on the exterior walls according to the instructions and formula of the Homasote Company.

b. Stone veneer 6" thick or better, or brick veneer 4" thick or better, may be used for the facing of the building. It should be well tied to the wall sections with metal ties, leaving 1" space between the stone or brick and the Homasote Sheathing.

c. If clapboards or bevelled siding are used they shall be manufactured from No. 1 and 2 Common, or better, White Pine or equivalent grades in other suitable materials. Where shingles are used, 1" x 2" wood furring strips should be run horizontally across the wall and nailed securely through the Homasote into the studs of the wall sections. They should be spaced according to the spacing of the shingles to the weather. Shingles should be No. 1 or No. 2 Western Red Cedar, applied in accordance with the recommendations of the Red Cedar Shingle Bureau, or recognized brands of same shingles applied according to the manufacturer's recommendations. In no case should wood exterior facing be closer than 6" to the soil.

Cement stucco and galvanized iron metal lath set on wood furring may be applied.

All lumber used in wall construction shall be No. 2 Douglas Fir, or equal.

10. FIREPROOF PARTITIONS AND FLOORS--State where they will occur...
.....
.....

Local building codes shall be strictly observed in regard to the requirements of building fireproof partitions and floors in certain locations.

11. CHIMNEYS--FLUES, etc. State materials to be used, size of flues.
.....
.....
.....

Flues from furnaces, stoves and fireplaces shall be lined with glazed clay tile pipe. All shall be built with brick or solid masonry walls 8" in thickness if not tile lined, and 4" if tile lined, and no smoke flue shall be less than 7½" diameter on the inside. The brick used shall be hard burned and all chimney walls shall be built in cement and lime mortar. If not lined, the inside faces of brick shall have struck joints pointed flush. Each smoke flue shall have a cast iron clean-out door set, wherever possible, at least 3' below the smoke inlet. No wood joists or beams shall rest on the brickwork forming a chimney flue. A stone, concrete or metal cap shall be applied to the top of each chimney to prevent disintegration of the brickwork. All chimneys shall be carried up to a height of 2'0" above the highest point of the roof unless they are at least 12' away from the ridge.

12. FIREPLACES: State material to be used, finish and location.....
.....
.....
.....

All fireplaces shall have trimmer arches of concrete or brick, etc., 6" minimum thickness, to carry the hearths, and no wood forms or other wooden members shall remain in place below the hearth. Open fire places shall be properly lined with firebrick or tile linings and be provided with a suitable damper, set to the manufacturers' detailed instructions. The net area of the flue from any fireplace shall be at least 1/12th of the area of the finished fireplace opening. It is desirable that an ash pit be provided below an open fireplace.

13. ROUGH CARPENTRY:

a. Material: State kind of lumber and grade, to be used in frame work, joists, studding, etc.....
.....
.....
.....
and in flooring, roofing, sheathing, etc.....
.....
.....

All materials used in joists, rafters, beams and studding, etc., shall be structurally sound, free from hard and soft rot, large knots that would impair its strength, shakes, etc. the following being No. 2 Common Douglas Fir or equal. It is recommended that joists 2" x 8" and up, be one grade

higher than listed above.

No joists shall be used in which knots of over one-fifth of the width of the joist occur in the middle half of the span.

Unexcavated space under wood floors shall be ventilated. For sub-flooring and roof sheathing, etc., all material shall be reasonably sound and entirely free of soft rot. No. 3 Common Douglas Fir or equal may be used for this purpose, providing such grading excludes material containing soft rot. All joists should be spaced not more than 16" on centers and rafters not more than 2'0" on centers. Studs, for wall and partition sections, shall be not greater than 16" on centers.

14. FINISH CARPENTRY:

a. Window and Door Frames .....
.....
.....
.....

b. Basement Window Frames and Sash: State material.....

c. Window Sashes, etc.--State whether double hung or casement or both.....
.....
.....
Are storm sashes to be supplied?.....
Are screens to be supplied?.....
If so, state material to be used.....
.....
.....
If shutters or outside blinds are to be supplied, give particulars including thickness.....
.....
.....
If metal weatherstripping of windows and doors is included, give particulars.....
.....
.....
.....

d. Exterior Wood Trim--State material to be used in outside trim, porches, etc., describing extent of trim briefly.....
.....
.....
.....
.....
.....
.....

Material used in outside wood trim shall be No. 1 and No.2 Common White Pine or better, or equivalent grades of other suitable woods.

e. Front Entrance Door and Frame: State material to be used.....
.....
.....

Door thickness (minimum 1¾").....
Type of door.....

f. Other Exterior Doors: Where?.....
.....
.....
.....
Are storm doors to be provided?.....

g. Garage Doors: Describe briefly the type and thickness.....
.....
Garage doors shall be at least 1¾" thick.

h. Interior Trim: Describe material. Ground or First Floor .....
.....
.....
Second Floor, etc.....
.....
Basement if finished.....

All inside trim shall be out of clean, sound stock suitable for receiving a good paint or varnish finish. The choice of material is left with the owner.

i. Interior Doors, etc. Describe type and material and thickness.
.....
Ground or first floor.....
.....
Second floor, etc.....
.....
Basement.....
.....

The minimum thickness of all interior doors to rooms, closets, shall be 1-3/8". The minimum thickness of exterior doors shall be 1-3/4".

j. Finished Flooring: Describe materials and thickness in principal rooms on Ground or First Floor.....
.....
.....
In other rooms.....
.....
On Second floor, etc.....
.....
In Bathroom.....
In Kitchen.....

Where floors are to be finished in wood, the material used shall be oak, birch, maple or beech, preferably 25/32" thick matched flooring in No. 2 grade or better, but 3/8" thick hardwood flooring may be used if laid on specially prepared underfloors.

Where soft wood floors are called for, No. 1 Common Yellow

Pine Flooring, or better, should be used. All flooring shall be blind nailed.

k. Main Staircase: Describe briefly materials to be used.....
.....
.....

The main staircase shall be of neat construction designed in keeping with the general character of the house. Treads shall be of hardwood or edge grain Douglas Fir made out of stock 1¼" minimum thickness. Handrails shall be of hardwood.

l. Service Stairs: Describe briefly, if any.....
.....

m. Kitchen Cupboards and Fittings: Describe briefly extent and materials.....
.....
.....
Built-In Ironing Board.....

n. Medicine Cabinet, Closet Shelving, etc., describe briefly extent and materials.....
.....
.....
.....

15. INSULATION: Describe briefly.....
a. On outside walls.....
.....
.....

b. On top floor ceilings between sloping rafters and under flat roof.....
.....

All insulation material shall be Homasote Weatherproof Insulation. It shall be nailed on the exterior walls with 5D cement coated box nails, and shall be glued on interior walls and ceilings with Sote Glue, and 1 x 2 pressure strips used to hold the material in place for at least forty-eight hours until the glue has set. All glued Homasote shall be edge nailed 6" on centers with 6D galvanized casing nails.

16. TILE WORK: State extent of work and type of tile to be used in
a. Vestibule Floor.....
.....
.....

b. Bathrooms.....
.....

c. Kitchens.....
.....

d. Elsewhere.....
.....
.....

It is recommended that in all houses the bathroom floor and the wall dadoes to a height of 4'0" (6'0" at shower) be tiled with a suitable ceramic or other floor tile on the floors and a wall tile with a glazed or matt surface on the

walls. All shall be laid by skilled tilesetters on a concrete base for floor work and to a cement plaster backing on expanded metal lath for wall work. Tile work on vestibule floors and in kitchens, etc., is optional. If stone, slate or marble is to be used for vestibules, fireplace hearths, etc., it can be mentioned above under "d".

BUILT-IN TOILET FITTINGS IN TILE WALL. Give list of such fittings as towel bar, tooth brush holder, soap and paper holders, etc., to be used, and their location.....
.....
.....
.....

17. ROOFING: State briefly the type of roofing to be used

a. On flat roofs.....
.....
b. On pitched roofs.....
.....
c. The kind and weight of metal (or other) flashings to be used..
.....
.....
d. Gutters and down spouts.....
.....
e. Connection to drain system.....

Flat roofs are required to be covered with a 4-ply 7 oz.coal tar saturated felt roof laid on dry felt properly secured to the roof and covered with coal tar pitch and gravel, all to the felt manufacturer's specification for 10 year guarantee roofs, or, as an alternative, with a 3-ply asphalt saturated felt roof composed of a base coat of 45 lb. felt and two layers of 15 lb. felt, laid to the manufacturer's specification.

Where the service is available it is recommended that a guarantee bond be obtained from a Surety Company through the roofing contractor and/or the manufacturer of the roofing material, guaranteeing to keep the roof in a watertight condition for a period of 10 years from the date of laying.

Sloping roofs shall be covered and left in a thoroughly watertight condition by the use of any one of the following materials(or better) provided always the use of the material selected is approved by the local code.

1. Sheet Metal Roofing: Either 26 guage galvanized copper-bearing sheet steel or 16 oz. copper laid on "rolls" or otherwise with raised joints to take care of expansion. These shall be laid on one layer of 7 oz. felt (or better) with joints lapped 4". All joints between metal sheets shall be "lock" jointed to allow for expansion and all nails and seams shall be soldered. No galvanized nails shall be used on copper roofing work, or vice versa, but the nails must be of the same metal as the roofing.

2. Roofing Slate: Suitable hard burned tile or other similar

roof covering as desired, properly laid over a 7 oz. felt covering (or better) with valleys, hips, ridges, etc., all protected by 26 gauge galvanized copper-bearing sheet steel, or 16 oz. copper flashings.

3. Asphalted Felt Shingles of not less than 210 lbs. weight to the 100 square feet, in colors as desired, laid to the manufacturer's specification, with all ridges and valleys, etc., flashed with slate surfaced roofing material as supplied by the shingle manufacturer, or metal flashed as described above for slate roofing.

4. Wood Shingles: In localities where the use of wood shingles is approved by the local code, sloping roofs may be covered with wood shingles, equal to or better than the following grades.

Eastern Cedar Shingles: "Clears" or better, or shingles at least 16" long and 3" wide with at least 6" measured from the butt of clear material free from all defects. The butts of 5 shingles piled together shall measure at least 2" in thickness.

Western Cedar Shingles: No. 3 Grade, XXXXX or better, or shingles at least 16" long with not more than 30% of the lineal width being less than 4" wide, with 8" measured from the butt of clear material free from all defects. The butts of 5 shingles piled together shall measure at least 2" in thickness.

It is recommended that wood shingles be pre-dipped in creosote shingle stain, or given two coats of creosote shingle stain after erection. The use of hot dip process galvanized nails or of copper nails for wood shingles is recommended.

5. Sloping roofs of flat pitch may be covered with felt and pitch or asphalt to manufacturer's specification, if it is found advisable to do so.

18. PAINTING AND GLAZING:

1. Painting: Describe briefly the extent of the painting work to be done and give the number of coats to be applied (including the priming as one coat) and state the materials to be used.

a. Painting outside woodwork.....
.....
.....
b. Treating outside woodwork other than by painting (Stain, Varnish, etc.).....
.....
.....
c. Painting inside woodwork, trim, etc.....
.....
.....

d. Staining and finishing inside woodwork, trim, etc.....
.....
.....
e. Finishing hardwood floors.....
.....
.....
f. Painting ceilings.....
.....
.....
g. Painting or papering walls.....
.....
.....

All exterior woodwork to be painted shall have three coats, including the primer, of a white lead or white lead and zinc oxide paint mixed in pure linseed oil, and containing not less than 50% of white lead in the pigments of all medium light colored paints. A "First Quality" paint manufactured by a standard paint manufacturer fulfilling this requirement and delivered ready to use in the manufacturer's original unbroken packages may be used.

Exterior woodwork to be stained shall be stained with two coats of creosote stain, or with oil stain followed by two coats of outside (spar) varnish of approved manufacture.

Inside woodwork to be painted shall be given three coats, including primer, of a standard paint manufacturer's inside paint made with a zinc oxide, lithopone or titanium oxide base, or a mixture of these. The use of lead paint for inside work is not recommended but may be used at the owner's discretion.

Inside woodwork (usually hardwood) to be finished in the natural shall be stained, filled if required, shellacked, waxed, or varnished as desired by the owner.

Water paint is recommended for walls and ceilings of the Ground or First, and Second floor rooms. Walls, etc., may be papered at the owner's discretion.

2. Glazing. Describe briefly the weight of glass to be used in windows (permanent and storm sash) and mention any special glazing work (leaded glass, mirrors, etc.,) to be installed.
.....
.....

All sheet glass used in window sash shall be equal or better than that sold in the trade as "glazing" quality. "Single weight" may be used in openings up to 2 sq.ft. and "Double weight" in larger openings. All shall be back puttied, well sprigged and face puttied.

19. PLUMBING WORK:

1. Materials. Describe briefly the following materials to be used in the Plumbing Fixtures and drainage system.

a. For soil pipe drains, etc.
Below basement floor.....
Above basement floor.....
b. For vent piping.....
c. For cold water piping.....
d. For hot water piping.....
e. For domestic hot water tank.....capacity.....gals....
f. For gas lines.....

It is required that all drain lines below the basement floor be "extra heavy" (XH) cast iron soil pipe set with lead caulked joints, and medium weight or better soil pipe with lead caulked joints above the basement floor.

Vent lines, and short waste water lines, 2" or less in in internal diameter may be standard weight (or better) steel pipe galvanized, with cast or malleable galvanized fittings. Recessed fittings on waste lines are desirable. Cold and hot water piping shall be standard weight (or better) steel pipe galvanized, but in districts where the city or town water supply is known to have a corroding effect on galvanized pipe, copper, or brass tubing or piping, with copper or brass fittings shall be used, particularly for the hot water supply lines. In such districts a copper or other non-rusting metal tank is recommended for domestic hot water.

Gas piping shall be standard weight black steel pipe or better with black cast or malleable fittings.

Every care shall be taken to ensure the use of fittings of the same materials as the pipe with which they are used. Under no circumstances shall iron fittings be used with copper pipe, or copper fittings with iron pipe.

2. Drainage System. Describe briefly the system of sewage disposal. If to city sewer state location of sewer line in reference to house.....
.....
.....
.....
If to septic tank state briefly its location, size and construction and means of disposal of overflow.....
.....
.....
.....
.....

It is required in every house that the house drain shall be connected either to the city or town sewers according to local codes, or to a septic tank either in metal or in concrete of sufficient size to take care of the waste from the house, properly located and with the waste water from the tank distributed upon the soil through unglazed farm tile pipes, or otherwise satisfactorily disposed of.

3. Plumbing Fixtures. Give catalogue number and size of plumbing fixtures to be used, in the following table, mentioning name of catalogue.

a. Basement:
Laundry tubs--size.....Cat.No.....
W.C. if any--type.....Cat.No.....
Basin, if any--size and type.....Cat.No.....
Bath, if any--size and type.....Cat.No.....

b. Ground or First Floor:
Kitchen sink, size and type.....Cat.No.....
W.C.,if any,type.....Cat.No.....
Basin, if any, size and type.....Cat.No.....

c. Second Floor Principal Bathroom:
W.C.,type.....Cat.No.....
Basin, size and type.....Cat.No.....
Bath,size and type.....Cat.No.....
Shower Bath,type.....Cat.No.....

Second Bathroom, if any:
W.C.,type.....Cat.No.....
Basin,size and type.....Cat.No.....
Bath,size and type.....Cat.No.....
Shower Bath,type.....Cat.No.....

4. Domestic Hot Water Supply.Describe method of heating.....
.....

20. HEATING WORK: Describe briefly the type of heating equipment to be installed under one of the following headings:

a. Hot Water Heating. Maker and size of boiler.....
.....Cat.No.....
Number of square feet of radiation to be installed.....
.....
Type of radiators.....
.....

b. Steam Heating: Maker and size of boiler.....
.....Cat.No.....
Number of square feet of radiation to be installed.....
.....
Type of radiators.....
.....

c. Hot Air Heating. Maker and size of furnace.....
.....Cat.No.....
Are distributing ducts and registers (hot and cold air) to be run to all principal rooms?.....
.....
If not, describe system briefly.....
.....
.....

d. If the following devices are to be installed for air conditioning purposes, etc., describe them briefly, giving maker's name and catalogue number if possible.....

.....
Motor driven fan.....
Humidifier.....
Air filter.....
Thermostatic control on house temperature, etc.....
.....

e. Has the heating system proposed, been designed by a heating engineer, employed by the owner, or by a qualified representative of the supply house, from the plans and specifications?.....
.....
What guarantee is being required of the heating contractor in respect to temperatures to be obtained in the house in cold weather?.....

It is recommended that all houses be heated by a suitable central heating system of one of the types described above, the system being adequate to provide a reasonable degree of comfort(70° or better)in the coldest winter weather.

It is desirable that the sizes of radiators, pipes, ducts, and furnaces be calculated by the architect or by a competent heating engineer or contractor, and it is required that a plan showing dimensions and locations of radiators or of air ducts be submitted with this specification. These dimensions may be shown on the regular floor plans or on a separate heating layout.

21. ELECTRICAL WORK:
Do plans show location of electrical outlets?.....
State type of wiring to be used. Knob and tube work.....
.....
Loomex.....B.X.Conduit.....
Rigid metal conduit.....
Are electrical fixtures included in the contract?.....
If so, what allowance has been made for their cost?.....
.....
Are any of the following services provided for in the contract?.....
Electric stove wiring.....
Electric domestic hot water heater and wiring.....
.....
Electric bells and wiring.....
Radio aerial and plug outlets.....
Conduit for telephone wiring and outlets.....
Other special services--describe.....
.....
.....

A distribution system of electric light fixture outlets, switches and plug outlets, suitable and adequate for each individual house, shall be provided in all houses, the approximate location of such outlets being shown on the plans

submitted.

All electrical installations shall be made by a certified electrical contractor in accordance with the N.B.F.U. or other ruling authority's regulations relative thereto, and a certificate in the form provided obtained from such authority, before connection is made to the main distribution lines.

It is recommended that the dining room and halls, etc.,be provided with ceiling outlets or wall outlets controlled by switches, four plug outlets or more in each living room, and one plug outlet or more in dining rooms, halls and kitchen, etc. In bedrooms one or two plug outlets according to the size of the room will be required, ceiling outlets being optional. Bathroom ceiling or wall outlets shall be controlled by switches.

Basements shall be provided with ceiling or other outlets, one or more in each sub-division.

Electric fixtures appropriate for the class of house and type of room are required for all ceiling and wall outlets in living room, halls, bathrooms, and bedrooms.

22. HARDWARE:

Is the finishing hardware (locks,hinges, etc.) included in the contract, or is it to be supplied separately by the owner?.....
.....
State approximate price allowed.....

In general, the finishing hardware shall be suitable and appropriate for the type of house in which it is to be placed. As a Minimum Standard of Requirements the following items are listed:

Front Door Hardware. Butts, steel ball-bearing sherardized cadmium plated butts finished to match other hardware, size 4" x 4" for doors $1\frac{3}{4}$" thick--3 butts to the door are recommended.

Lock Set. A double bolt cylinder front door lock set with stamped brass knobs and plates, or a thumb latch set as desired, in rustproof metal. Other items such as letter plates, etc., shall be in stamped brass or other rustproof metal.

Inside Door Hardware. Butts, 2 per door, using loose pin, ball tipped pressed steel, plated butts, size $3\frac{1}{2}$" x $3\frac{1}{2}$" for doors 1-3/8" thick, and 4" x 4" for $1\frac{3}{4}$" doors.

Locks. Minimum size and type $3\frac{1}{2}$" casing with appropriate knobs and plates, or knobs and separate key escutcheons in

steel, plated in brass, bronze or nickel as required.

Rear Door. Steel butts 3½" x 3½" for 1-3/8" doors, 4" x 4" for 1¾" doors--3 butts per door recommended.

Pulleys in double hung windows shall be standard steel pulleys or better.

Window Locks. "Crescent" type, iron locks, plated, and "hook" sash lifts, are recommended.

Butts for casement windows shall be 3" x 3" steel butts, or better, for 1¾" sash, and 2½" x 2½" for 1-3/8" sash.

Casement Fasteners. "Tee handle" type fasteners are recommended for sashes 4'0" and under in height, and Cremone bolts for sashes over 4'0" high.

Kitchen Cupboard hardware shall consist of suitable plated cupboard door butts, knobs, metal or wood, drawer pulls, etc. Cast iron plated, or other finish, coat hooks of suitable type are required for closets off bedrooms, coat closet, etc.

, SPECIAL EQUIPMENT: Describe briefly any special equipment or finishing included in the work to be done to complete the house.....
.....
.....
.....
.....
.....

l. STRUCTURAL STEEL WORK: If steel beams and columnsare to be used in the floor framing, etc., give dimensions and location if they are not shown on the plans.....
.....
If steel lintels are to be used over openings in walls, describe location and give sizes.....
.....
.....

NOTE: Describe in detail any Special Material, Workmanship or Equipment not covered in the above specifications.

CERTIFICATE BY OWNER

I, the undersigned, hereby certify that the information contained in these specifications and the accompanying plans for the house which I purpose to erect is to the best of my knowledge and belief true and correct, and that I agree to erect, or cause to be erected, the house described herein according to these specifications and the said plans.

SIGNED.....(Owner)

CERTIFICATE BY CONTRACTOR

I, the undersigned, contractor for the construction of the house described in these specifications and the accompanying plans, do hereby certify that I have examined the said plans and checked these specifications and that the said plans and specifications will be followed by me in the erection of the proposed house.

SIGNED.....(Contractor)

CERTIFICATE BY ARCHITECT

I, the undersigned, architect, do hereby certify (a) that I prepared the accompanying plans and furnished the information as contained in these specifications, (b) that it is my intention to supervise the construction of the house referred to in the said plans and specifications and to ensure that such house is built in accordance with the said plans and specifications.

SIGNED.....(Architect)

Note: If the construction of this house is not to be supervised by the Architect he will delete part (b) of his certificate.